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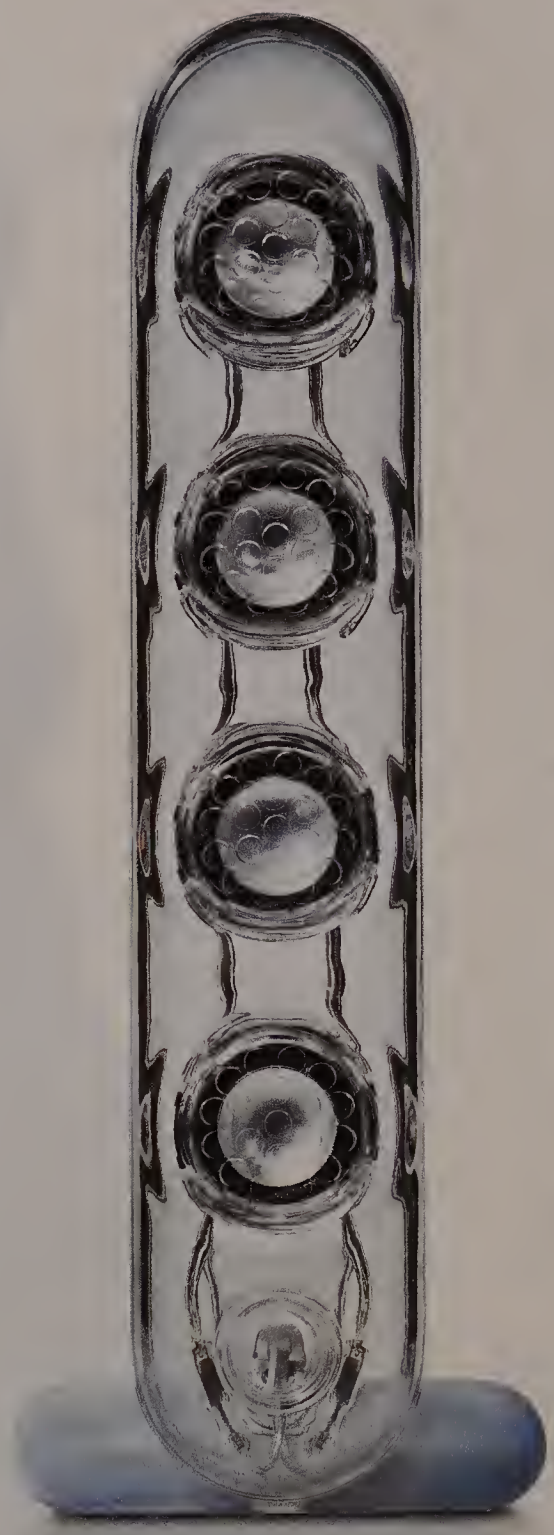

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Your Mac, Your Way
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Whether or not you plan to switch to OS X, you can do a lot now to make your Mac look and act the way you want it to. Check out our cool tips and tricks for customizing your operating system and applications.
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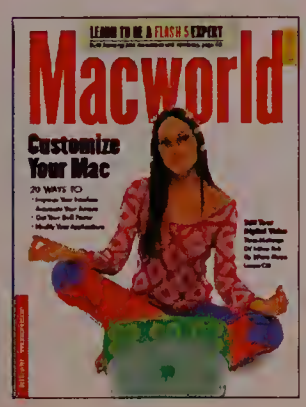

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123 ♦♦♦♦ Home Cancert 2000

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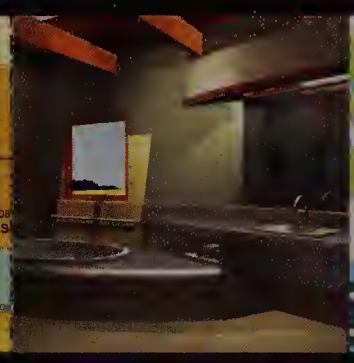

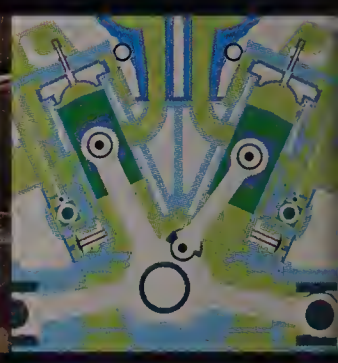

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ANDREW GORE

The Andy Awards

A SCIENTIFIC SURVEY OF ONE MAN'S FAVORITE PRODUCTS

Sometime on the evening of January 8, 2001, *Macworld* will reveal the names of the 30 best Macintosh products of the year, the recipients of our annual Editors' Choice Awards. Selecting Eddy winners is a long and arduous process, in which the best minds at our disposal and the only independent testing lab in the Mac market work for months to determine which—among the hundreds of products that shipped in the past year—are the best of the best. You can see right now who's been nominated at www.macworld.com/subject/eddy/.

Because so many products are evaluated and found wanting, it truly is an honor just to be nominated. And keep an eye on that URL; as soon as the awards are handed out, we will post the names of the lucky few to receive a golden statue.

The Eddy Awards are a survey of editorial preference. But with the support of the Macworld Lab and the 30-plus editorial experts who participate in the process, the result you get is as close to scientific as possible. And that's great. But it does leave one small hole: What are our *personal* preferences? What products do we use to sate our own Mac lust, and why?

That's where the Andy Awards come in. Like the Eddys, these prestigious awards are also based on a survey of editorial preference. It's just that it's only one editor's preference—mine.

So without further ado, let me present the Andy Awards.

The Amazing Kreskin Award

The winner is: **Google** (www.google.com). I will admit to being a bit prejudiced on this one, as I was a beta tester for Google for more than a year before it was released to the public. However, I got to be a tester because I've used so many Web-based search engines. And frankly, none holds a candle to Google. In my mind, the real test of a search engine is the telepathy factor: how often does it give me what I want on the first page of my search, when even *I'm* not really sure what I'm looking for? It's scary just how often Google gets it right the first time.

The Oldie but Not Moldy Award

The winner is: **SonicBlue's Rio 500 MP3 player**. There's nothing more annoying than that feeling you get when the state-of-the-art computer you bought just six months ago is now ready to be put under glass at the Smithsonian. Besides death and taxes, obsolescence in technology is the only thing you can't avoid. That's why I was so pleased when it turned out that my Rio 500 (one of the very first they made) wasn't rendered obsolete when the Rio 600 shipped—and its value was even enhanced: my original Rio has twice the built-in storage of its shiny new sibling!

The We Know Better Award

The winner is: the **Apple Pro Mouse**. Yes, it's optical; yes, it looks cool; and, yes, it's not round. All good reasons to like the new Apple mouse, but not quite enough to earn it an Andy Award. No, the reason I'm honoring the new mouse is this: For years users have been begging Apple for a two-button mouse. So what does Apple do? Ship the world's first no-button mouse!

The Devil Made Me Do It Award

The winner is: **Diablo II**. Let's be honest—we all know playing video games takes us away from the important things we should be doing. But we don't care; we want to be corrupted. When it comes to products designed to corrupt us, what could be better than a

continues

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game about the Devil? I've lost more productive time playing Diablo II than I care to think about. But I have gained such inestimable benefits as sleep deprivation, alienation from my family, and having something besides general temperament in common with 100,000 teenage boys. And since I've finally won the game and freed myself of the Diablo II addiction, all I can say is, I can't wait to get my hands on the Diablo II Expansion Pack.

The Choice Editor Award

The winner is: **Adobe ImageReady 2.0**. Next to my e-mail, Web browser, and, of course, word-processing program, my most-used application is an image editor. I use image editing for a vast array of tasks, from building animated GIFs for my Web site to viewing photos from my digital camera. I have access to all the image editors available for the Mac, but I've found only one that does it all. No, not Adobe Photoshop . . . ImageReady. It slices, it dices, it opens everything, and it has easy and powerful text handling and a nice slate of effects. I've even grown comfortable using layers to edit complex images. Frankly, I find ImageReady to be superior to Photoshop. There, I've said it; you Photoshop and Fireworks fanatics may begin the flame mail.

The Timex Award

The winner is: **WebStar Server Suite 4.2**. When it comes to the Internet, I'm a competent amateur who doesn't have enough sense to be afraid to try new things. When I set up my first Web, e-mail, and FTP server in my son's closet, I had no idea what I was letting myself in for. Different software, conflicts, DNS configuration, caching—it was a nightmare. Then along came WebStar, and my server hasn't had a down day since. (I wish I could say the same for my *Macworld* office e-mail.) It's reliable, fast, and flexible. When I want to try something new, there's almost always a plug-in available to do it. And administering the server, even from my office in San Francisco, couldn't be easier. It's the Internet hedonist's best friend!

The Swag Award

The winner is: **Apple**. When you work in the Mac industry, the one thing you can be sure of is, you'll never have to buy another T-shirt. To see what I mean, just come to Macworld Expo in January and walk the floor for a day. You're guaranteed to collect enough T-shirts, hats, bags, and useless tchotchkes to last at least a year.

Most of this stuff is wasted on me. After 17 years in the business, I have enough T-shirts to start my own Gap store. However, I did get something at last summer's Expo that I do use—every day. In fact, I got it from a company not usually known for being free with the trade-show swag. Everyone who managed to make it into the main keynote hall got a free Pro Mouse, courtesy of Apple. I hope Apple not only continues this trend but also tries to one-up itself. I know—how about a free iMac DV to everyone who shows up for Steve Jobs's keynote speech in San Francisco? I understand he's got a few spares lying around. **m**

ANDREW GORE is *Macworld*'s editor in chief. To comment on this column, please visit the Vision Thing forum at www.macworld.com/columns/visionthing.

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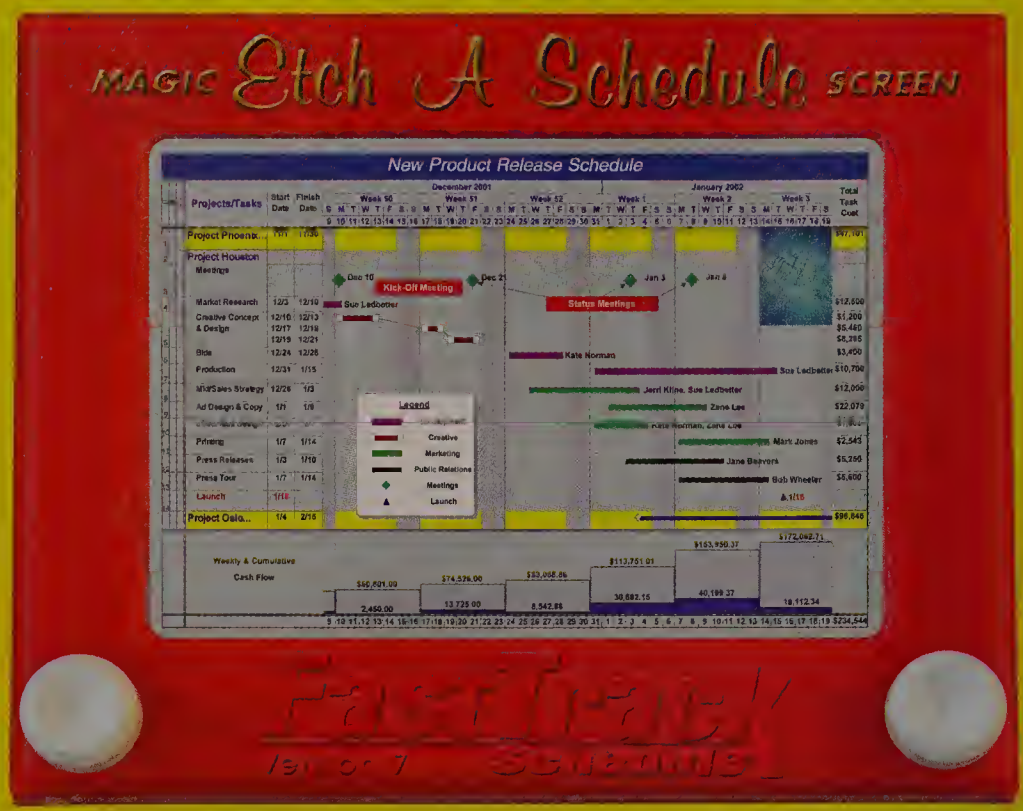

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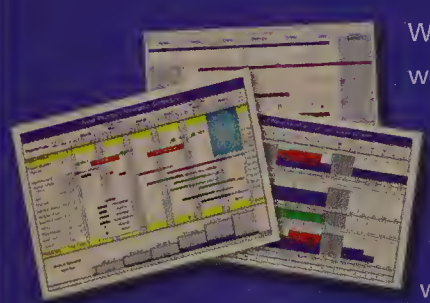

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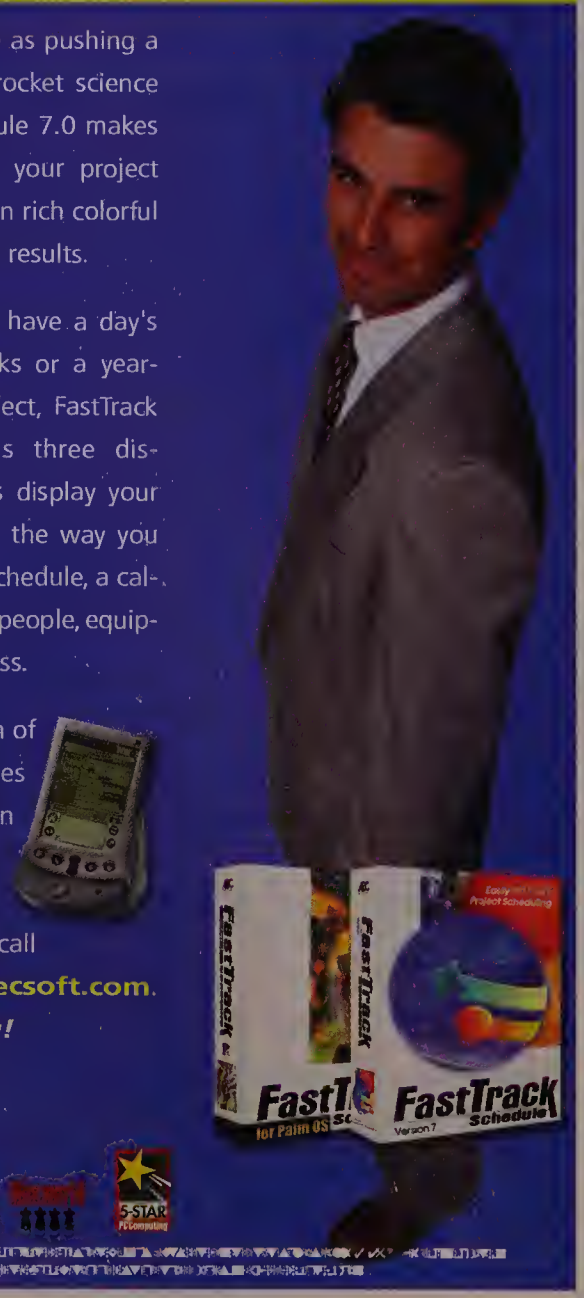

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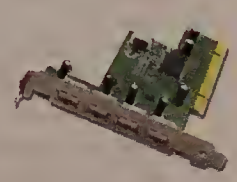

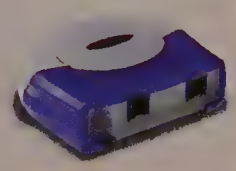

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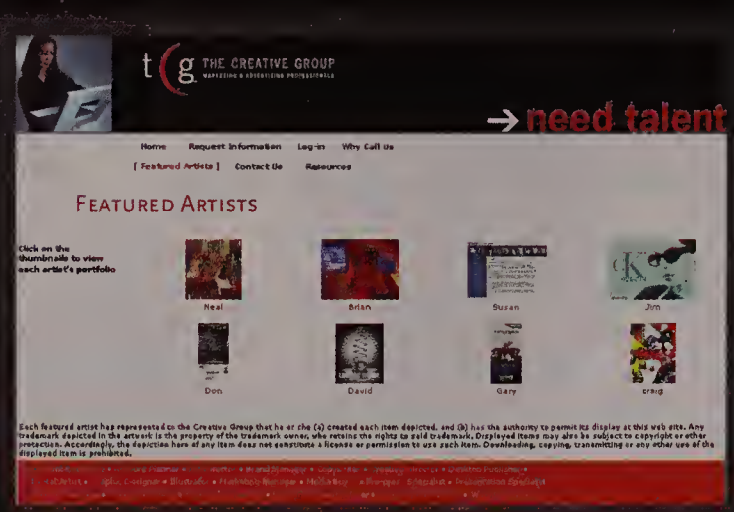

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BPA

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that inspire?

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– David LaChapelle

David LaChapelle | used the Camedia E-10 SLR

Lens: 9mm (35mm equivalent) with 0.8x wide conversion lens for 7.2mm (28mm equivalent), AF mode – normal
Exposure: Manual exposure (1/60th), aperture f9.0, ISO 80, manual white balance – 5500°K
Light: Studio strobes with a beauty dish

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Would you like pictures like no other? Ask your Olympus reseller all about the E-10 SLR. See what we've done with digital photography. Then go out and see what you can do with it.

http://e-10.olympus.com

The digital E-100 Rapid Shot

The photo you've been trying to take your entire life may have always been buried between frames two and three. To help capture those hidden moments, Olympus created the Camedia E-100 Rapid Shot.

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We encourage you to ask your Olympus reseller about everything this lightning-fast camera offers. It's our hope the E-100 Rapid Shot will help you see photographic opportunities you've never seen before.

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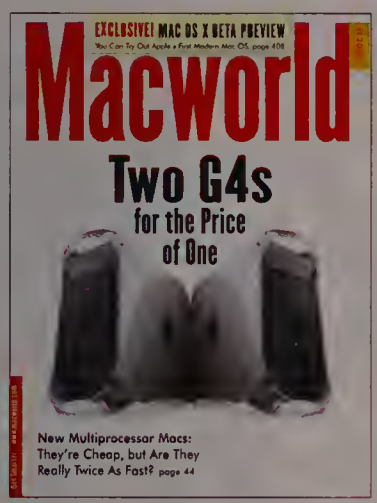
Feedback



Deadly Modems

When you discussed satellite as an access method ("Kill Your Modem," November 2000), you left out one detail that's important to me: latency. Satellite access methods are very fast, but there's a large time delay (compared with DSL, cable, or ISDN) when information travels to your dish from the ISP. Internet gamers call this *high ping*. Effectively, the information addressed to you is delayed before it reaches your dish. Once it gets there, however, you do get the full 400 Kbps. For surfing the Web and exchanging e-mail, it's fine. But for games such as Quake or Unreal Tournament, satellite is fast enough only for losing matches.

Todd Beaubien
Houston, Texas

There is hope for people who can't get cable or DSL service in their homes: it's called wireless broadband. My ISP installed a TV antenna on my roof, similar to those used for local radio-frequency transmission of "wireless cable" television. You must have line-of-sight to one of your ISP's antennas, but that's the only restriction. Speed is based on what you're willing to pay for, and there's a setup fee that covers the needed hardware.

Aside from some start-up glitches, my service has been very good. It's 24/7, it's fast, and it doesn't interfere with or even require a phone line.

David S. Angal
Medford, Oregon

Another high-speed alternative is IDSL, a service good for anyone outside the three-mile limit of coverage for DSL. Unfortunately, IDSL does not provide concurrent voice capability, as DSL does; it simply provides high-speed Internet access (in my area, a maximum of 144 Kbps in both directions). Also, ISDN provides an important option that was not fully explained. One copper wire pair into your home, connected to an ISDN terminal adapter (router), provides two "channels." Each can be used as a voice line (you actually get two phone numbers) or a data/Internet line (at speeds up to 64 Kbps per channel). ISPs charge either for a single-channel (64 Kbps) or dual-channel (128 Kbps) dial-up. With dual-channel, you can make or receive phone calls while online. The system automatically drops one channel to handle the phone call, and then reestablishes the full Internet connection when you're done with the call.

Ben Levi
Boulder, Colorado

IDSL is a useful alternative if your home or office is too isolated for DSL. However, you can expect to pay two to three times as much for IDSL's drastically slower speed around (144 Kbps). ISDN's voice features can be useful, providing you purchase equipment that utilizes them. To learn more about ISDN's voice capabilities, see "Connect with ISDN" (October 1997) or visit www.macworld.com/1997/10/features/3915.html.—Ed.

Size Matters

Despite Apple's claims to the contrary, connecting the Cube to its external power supply, monitor, headphone adapter, speakers, keyboard, and mouse results in a morass

continues

of cables littering your desk. I'd much prefer a headless PowerBook with built-in UPS (the battery), expandability (PC card slot), infrared to talk to my Palm (without a cradle), and accessible media bays for quickly adding a Zip, DVD, CD-R, or hard drive. Then the detachable display could be clipped on for portable use.

Of course, I'm biased. I've used the G3 Series PowerBook as my desktop machine since it was introduced. Best of all, when I'm done computing, I close it up, slide it out of the way, and get my real desktop back. Try that with a Cube.

Anthony Burokas
Philadelphia, Pennsylvania

Keyboard Solutions

One of the cons that was listed in *Macworld*'s review of the Apple Pro Keyboard was its lack of a power key (November 2000). To compensate, I created three simple AppleScripts and assigned them to function keys (F13, F14, and F15) so I could use my keyboard for sleep, restart, and shutdown commands. To boot up, I still use the power button on the front of my iMac. A template follows (you can replace **sleep** with **restart** or **shut down** as desired):

```
tell application "Finder"
  activate
  display dialog "Sleep?" buttons
{"Cancel", "OK"} default button 2 with
icon stop
  if the button returned of the
result is "OK" then
    sleep
  end if
end tell
```

Joshua Sucher
Brooklyn, New York

Coincidentally, your November 2000 issue arrived the same morning as my (back-ordered) Apple Pro Keyboard from the Apple Store. While Franklin N. Tessler's review was right on with respect to the short USB cable, I discovered that the box contained an extension cable (about one meter long), apparently at no extra cost. Thanks, Apple, for doing the right thing for a good "out of box" experience without even being asked!

Lou Kreig
Colchester, Vermont

Double Vision

Surely a magazine such as *Macworld*, with its devoted and discerning readership of graphic artists, would know better than to reverse a photo without correcting asymmetrical elements (like the Apple logo). And surely it would know better than to place such a photo on the cover (November 2000). And surely it would know better than to do it in the very issue that extols the history and wonders of Photoshop!

Byron Salazar
Gainesville, Florida

Surely. Unless, of course, the designer was trying to achieve a mirror-image effect with the second G4.—Ed.

The Feedbag

No one has accused the Mac OS X programmers of organizing a rash of alien abductions—yet. But we've received just about every other conceivable comment about what they've done with Apple's new operating system.

Some conspiracy theorists allege that "Mac OS X is really OpenStep 5"—and therefore just a retread of Steve Jobs's Next operating system. Reader "Bone" was so excited that he wrote, "I'll fork over $30 today to get Aqua and Unix on my dual-processor G4."

Even in the Mac world, it seems, we must agree to disagree. Take Jeff Paris, who feels Apple could make some good money by offering a product for people who prefer the good old days: "Start thinking about a separate OS for us that leaves out all the bloatware you keep adding to your system upgrades, OS X being the latest iteration." Now if only they could get System 7 to run on a G4. . . .

Then again, reader Tom Pittman feels that Mac OS X is itself a retro operating system, reminiscent of old software—and not in a good way: "The Finder is gone! They replaced it with a feeble clone of Windows Explorer." Another concerned reader said simply, "God help Apple if they don't keep OS 9." OS 9? That's already been taken back to the mother ship in an attempt to figure out voice recognition.

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CORRECTIONS

The high-definition camera system described in "Direct to Video" (*Buzz*, November 2000) was developed by Sony Electronics and Panavision. **m**

I'd heard a lot of buzz about ATI's new RADEON™ MAC EDITION, it's stunning 3D acceleration, 32MB DDR graphics memory and flexible display support. I wondered, would this graphics accelerator really make designing, easier and faster? Wow! it didn't take long to find out. RADEON™ MAC EDITION, rendered the most complex 3D elements faster than I'd ever seen, even when working in 32-bit true color! My projects literally sprang to life with incredible detail and realism. But RADEON™ MAC EDITION isn't all work and no play. The 3D gaming — on my lunch break of course, is just as incredible with noticeably faster frame rates. With the fastest rendering speeds available, animations are fluid and life-like. Plus, I can hook up to a TV for a big-screen experience. 3D rendering performance, awesome gaming and display flexibility make RADEON™ MAC EDITION one wicked card!

Gimme Radeon!

"Overall the most advanced 3D and video graphics chip to date for the Mac." www.xlr8yourmac.com, October 16, 2000

32MB PCI & AGP

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iBook versus PowerBook

Battle of the Books

At first glance, it looks like an obvious mismatch. Comparing Apple's professional-end PowerBook to the consumer-friendly iBook? That's like Mike Tyson stepping into the ring with TV's Urkel.

But before you write off the iBook's chances in a laptop showdown, consider recent changes Apple has made to its portable products. While new PowerBooks are rumored to be in the works, the 400MHz G3 PowerBook currently shares many features with the iBook SE—64MB of installed RAM, a 10GB hard drive, FireWire support, and a DVD-ROM drive. The difference? The iBook SE packs a greater processing punch—a 466MHz CPU—at a lower price. It costs $1,799—$700 less than the $2,499 PowerBook.

So it's the iBook in a walkover, right? Sure . . . if processors and price tags are your only criteria.

The showdown is a closer contest than you might imagine.

But those aren't the only things to look at when you're choosing between an iBook and a PowerBook. What you plan on doing with your laptop is just as important. After all, what good are 66 extra megahertz or 700 saved dollars if the machine you buy doesn't meet your needs?

We had the iBook and PowerBook face off in eight categories, from the technical to the aesthetic. We looked at how fast each laptop was, how much each machine weighed, and even how much screen real estate each had to offer—the sort of things Mac users should consider when choosing a portable machine.

Turns out the Iron Mike–Urkel showdown is a closer contest than you might imagine.—PHILIP MICHAELS

More Info:
www.macworld.com/subject/portables

Macworld.com has the latest information on Apple's portable products.

LINK

ILLUSTRATION BY BUD PEEN

BUZZ

News, Views, and Chatter from the World of Macs

Behind the Books

Here's how the iBook SE and 400MHz PowerBook compare in key categories.

CATEGORY	iBOOK SE	400MHZ POWERBOOK	THE WINNER IS . . .
Price	$1,799	$2,499 (Apple was offering a $200 rebate online at press time).	The iBook is hard to beat if you're on a budget.
Performance	A 466MHz G3 processor—only the 500MHz PowerBook sports a faster CPU.	But this PowerBook's system bus is faster than the iBook's: 100MHz (versus 66MHz).	The iBook is faster but not by enough to really make a difference.
Screen Size	A 12-inch active-matrix screen, surrounded by a lot of plastic.	A 14.1-inch active-matrix screen that goes right to the casing's edge.	The iBook has a good screen, but the PowerBook is better for video-intensive jobs.
Graphics	Say hello to a new ATI Rage Mobility 128 chipset.	That's the same Rage Mobility chipset you'll find in the PowerBook.	Let's call this one a push.
Expandability	You can add memory but not much else. That DVD drive stays put. And removing the battery can be a chore.	Want to swap out your DVD drive for a Zip drive, a floppy drive, or an extra battery? You can.	For travelers, the PowerBook's ability to carry an extra battery gives it a clear edge over the iBook.
Ports	Along with its USB connection, the iBook now has ports for FireWire and a composite video out.	Two USB ports, two FireWire ports, a slot for a PC card, S-Video and VGA outputs, and a world of possibilities.	The iBook's new FireWire port is a great addition, but the PowerBook still beats the iBook for flexibility.
Battery Life	Our tests say you can get more than three hours of use out of a single charge.	PowerBook batteries last about two hours. But don't forget that extra battery.	The iBook consumes less battery power. The PowerBook offers more flexibility.
Weight	To carry the iBook, which weighs nearly 7 pounds, you'll need its built-in handle.	It weighs just over 6 pounds. Remove the DVD drive, and it drops to 5.7 pounds.	Travelers who haul their laptops on the road, take note: the PowerBook is narrower, too.

MAC WATCH

I Read It Only for the iBooks

It may not have been the first thing magazine-stand patrons noticed about the October 2000 issue of *Playboy*. But right there on the cover—next to the winsome model, of course—is an iBook. Sure, the Apple logo is well covered, but that unmistakable blueberry-and-white plastic casing helps the laptop stand out—unless you're still looking at the winsome model.

©2000 PLAYBOY

For *Macworld* readers without the time or inclination to scour the pages of *Playboy*, I stepped in and—just for research purposes, mind you—bought the magazine. Much to my dismay, I couldn't find a single picture of a Mac inside the issue. Until I got to the Centerfold, that is. . . .—PHILIP MICHAELS

PLAYMATE DATA SHEET

NAME: iBOOK SE

MEASUREMENTS: 366MHZ - 64MB - 10GB

PLACE OF BIRTH: ASSEMBLED IN TAIWAN.

TURN-ONS: POWER BUTTONS, MAC OS 9.0.4, AIRPORT CARDS, WALKS ON THE BEACH (THAT DON'T USE UP ALL SIX HOURS OF BATTERY LIFE).

TURNOFFS: POWER SURGES, INSUFFICIENT INSTALLED RAM, RUDE PEOPLE.

BIGGEST WORRY: SOMETIMES I FEEL LIKE A KEY LIME iBOOK TRAPPED IN THE BODY OF AN INDIGO.

FIRST THING PEOPLE NOTICE ABOUT YOU: I'M ALWAYS CATCHING SOME WISE GUY SNEAKING A PEEK AT MY FIREWIRE PORT.

PHOTOGRAPH BY SCOTT PETERSON; PLAYMATE DATA SHEET REPLICA COURTESY OF PLAYBOY

QUICKTIME 5

Pay per Page View?

Let's say that rock concert everyone's been raving about becomes available online. You go to the Web to watch it through your QuickTime Player. After a few minutes, the show stops. Pay a fee, and you can see the rest.

Welcome to the world of on-demand QuickTime content, brought to you by SealedMedia (415/394-9999, www.sealedmedia.com). The company makes downloadable digital-rights–management software that lets Web publishers sell their online content to credit card–carrying surfers. And its product will be available as a plug-in for QuickTime 5.

"[Web sites will] run a movie for ten minutes and then they'll scramble it," says Alan D. Mutter, president and CEO of SealedMedia. "If you like it and get hooked, you can buy it and watch it."

The plug-in lets you buy content on a view-only or a permanent basis. "You download it once, and it's permanently plugged into your QuickTime Player," Mutter says.—ADELIA CELLINI

Skipping Out

Apple's upcoming QuickTime upgrade beefs up the multimedia system software's streaming capabilities. QuickTime 5 will ship with MPEG-1 streaming support, as well as support for MPEG-3 (MP3) streams from Shoutcast.

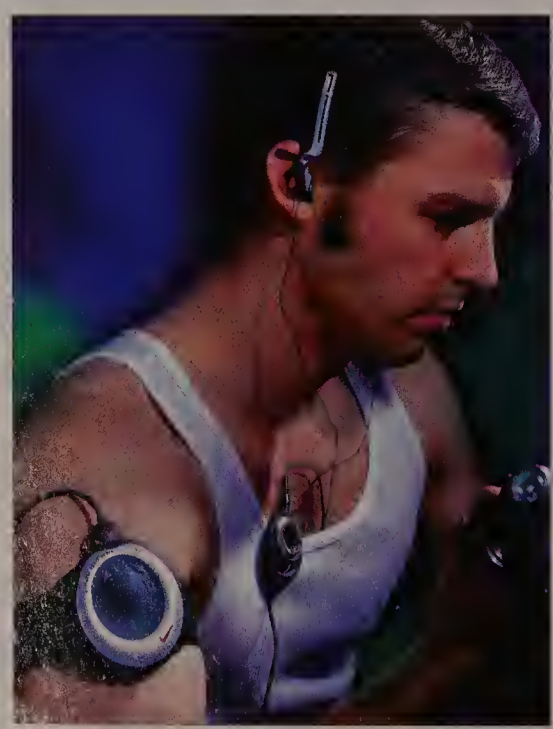
More important, QuickTime 5—when used with QuickTime Streaming Server 3—will be better able to prevent transmission skips during playback of streaming audio and video. It will buffer streams and then fill in the blanks that occur with streaming packet losses—a process similar to the way a portable CD player reads ahead during a track and fills in the blanks when it's jostled.

The result? QuickTime 5 can stream content virtually without interruption. And heaven knows, interruptions and skips are the last thing you need when you're watching Keanu Reeves emote in that movie trailer you downloaded.—MATHEW HONAN

COOL STUFF

Play On . . . And On . . .

When it's time to work out, you wouldn't don decades-old sneakers or use equipment left over from Jack LaLane's boyhood gym. So why keep bringing that bulky music player along? The Nike PSA/Play 120 weighs a scant 3 ounces. The rounded design slips easily into a pocket or attaches to an arm band (included). S3 (541/967-2450, www.riohome.com), makers of the Rio MP3 player, developed the $300 PSA/Play 120 with Nike, which apparently is moving its quest for global domination beyond athletic apparel and Tiger Woods ads. PSA/Play's expandable 64MB built-in memory plays two hours' worth of MP3 and Windows Media (WMA) files, enough to accompany the most grueling workout. The digital-display remote makes choosing a playlist easy, even on-the-go. After all, those 30 minutes on the StairMaster are hard enough without your MP3 player weighing you down.—ANTON LINECKER



PHOTOGRAPH BY TOM GIBSON; ILLUSTRATION BY GORDON STUDER

MACS AT WORK

WWF: Putting the Mac in Smackdown

The glitter-suited behemoths of the World Wrestling Federation are out to choke-slam the Web. Clips of wrestlers ruling the ring have made WWF.com the Web's third-largest streaming-video site, DBP Webcast Track says.

The WWF's Stamford, Connecticut, offices are predominantly PC. But the six Macs in the new-media department created most of the WWF's Web pages.

Using Macromedia Dreamweaver and Adobe Photoshop and Illustrator, the designers update pages to reflect the action in the ring. The greatest challenge, New-Media Creative Director Paul Magliari says, isn't portraying wrestlers such as The Rock; it's making sure the WWF's female grapplers appeal to a male-dominated audience.

After all, how do you make Trish Stratus strong enough for a tough guy but tender enough for a lonely tough guy?

WWF Vice President for New Media Lee Barstow hopes for a day when the WWF's Web sites supersede its TV presence. As broadband comes online, WWF wants to expand its global reach—currently 150 countries—without worrying about foreign broadcast rights. "The story lines and the good versus evil—it kind of translates into any language," Barstow says.

Wrestler The Kat (right) visits the WWF's new-media department.

As does a basic computer question: If a wrestler were to smash a rival over the head with a Mac, would it be an iMac or a G4?

"An iMac," answers Barstow. "It would be more colorful."—DAVID FERRIS

FROM THE LAB

Increasing Your Word Power

Mac users still mutter under their breath about Microsoft Word 6, the memory-hogging word processing program that was slower than a Richard Marx ballad. Macworld Lab ran the software on a typical computer from the Word 6 era—a Power Mac 7600/132—and found, not surprisingly, that its performance lagged significantly behind Word 2001's on a 400MHz iMac. But stick Word 6 on that iMac, and you'll see speeds comparable to the latest version of Word. It looks as though Word 6 was a fine application—all it needed to run properly was a computer that wouldn't be invented for another six years.

Program	System	Start-up	Word Count	Find and Replace
Microsoft Word 6	Power Mac 7600/132	15	22	405
	iMac DV 400MHz	7	10	79
Microsoft Word 2001		6	2	86

All times are in seconds. Test systems were a Power Mac 7600/132 and an iMac DV 400MHz (2000). Both systems had 128MB of RAM, Mac OS 9.0.4 installed, and virtual memory enabled.—**Macworld Lab testing by Ulyssis Bravo**

BUZZ

WEIRD STUFF

iSmell? No, You Smell, Buddy!

Strawberry. Grape. Tangerine. Old iMac colors? Nope—new Mac *aromas*. Treading the thin line between brilliant and bizarre is iSmell, a speaker-size device that adds a whole new dimension to your computing experience. Able to mix and match elements from a hundred-scent palette, the iSmell from DigiScents (510/208-4300, www.digiscents.com) can produce thousands of unique odors. Savor the aroma of the coffee beans you're about to order online. Smell the spent shotgun casings—and your opponent's fear—as you play a scent-enhanced first-person shooter game. Due for release at the end of 2001, the Mac version of the peripheral should make its public debut at January's Consumer Electronics Show in Las Vegas. No matter how well it works, it's sure to raise a stink.—GREG KNAUSS

ILLUSTRATION BY KIM STRINGFELLOW; PHOTOGRAPH COURTESY OF THE WORLD WRESTLING FEDERATION (ENTERTAINMENT, INC.)

Scott McCloud made his mark in the comics world with his long-running series, Zot! *But the two books he's written—*Understanding Comics *(HarperPerennial, 1994) and* Reinventing Comics *(HarperPerennial, 2000)—have given the comic-book artist wider recognition. "I've been on this crazy crusade since 1994 about comics and computers," says McCloud, who now publishes* Zot! *online at www.comicbookresources.com. "I'm forever evangelizing this stuff." McCloud sees a revolution coming in the comics, with computers—and the Mac—playing a leading role.*—LISA SCHMEISER

PRO FILE

Dot-Comics

Q&A with SCOTT McCLOUD

Q: *What was the "aha! moment" for you when it came to using computers in comics?*

A: It was gradual for me. I bought my first Mac, a Performa 200, in late 1992, just as I finished *Understanding Comics*. I wasn't hostile to the idea of making comics [on a computer], but I didn't think computers were ready for it. Then I fell in love. I got a Quadra not too long after that. I gave myself license to play around and not try immediately to turn it into a moneymaking venture. I felt play was very important—to have fun first, to see what happened and not try to bend the process to my will.

Q: *What machine are you using now?*

A: I've got an old clone, a creaky little PowerCenter150. I've also got a PowerBook G3, but it's time to upgrade the desktop machine as well.

Q: *What differences are there between what you used then and what you're using now?*

A: It's a whole different world. I had a copy of [Adobe] Illustrator when it first came out, and it just couldn't run on the Performa. I think the biggest change is in Web-oriented tools. GIFmation, Fetch—those became very important to me. I also became a convert to the idea that connectedness is a very important feature in computing. The window onto the world of my desktop is just so radically different.

More Info:
www.macworld.com/2001/02/buzz/mccloud.html

Find out about Scott McCloud's experiences with publishing his comic series *Zot!* online.

LINK

www.joesparks.com

CLICK HERE

Radiskull Hate Buzz!

He is the Radiskull. He will kill us one by one. Or so says this disembodied, toothsome skull. Radiskull and his sidekick, Devil Doll, are the animated stars of **joesparks.com**, the product of Flash artist Joe Sparks's fertile imagination. Each episode of *Radiskull and Devil Doll* features the duo rapping to a heavy-metal beat and lamenting such evils as snow, fruit, and happy. Radiskull, in his own vernacular, "hate happy." But Sparks offers more than a fun Flash cartoon land. He dedicates several pages to production notes, detailing the hows and whys of Radiskull, along with shots of his Mac workstations. Sparks also offers Flash tricks and tips, such as how to generate 3-D landscapes. Radiskull may not care for any of this—he "hate happy," after all—but that doesn't mean you won't get a kick out of it.—MATHEW HONAN

Medicine For Your Mac

Nothing can ruin your day faster than a sick and ailing computer. And while Macintosh is one of the most reliable computers in the world, sometimes things can go wrong. That's why we invented TechTool Pro. TechTool Pro is the super-utility that can find and isolate almost any problem on your computer. No other utility in the world comes even close to covering as many aspects of your Macintosh as does TechTool Pro.

But diagnosing computer maladies is only half the battle. Besides repairing drives, recovering data and checking the health of your Macintosh components, TechTool Pro can now help protect you against virus problems and software conflicts. TechTool Pro can also keep your Mac running at its peak between problems. The program optimizes your disk drive to make your computer run faster and more efficiently. Our RAM panel even allows you to see the inner configuration of your memory without needing to open the case.

Do all these features make TechTool Pro complicated to use? Not at all. The MultiTester feature allows you to give your computer a full checkup with one click of your mouse. TechTool Pro even creates graphic, easy-to-read and understand reports. Now you can know the state of your computer without having a degree in computer science.

Every day, more and more Macintosh professionals are choosing TechTool over other system utilities. In fact, even Apple Computer includes TechTool Deluxe with every copy of their AppleCare™ Protection Plan. Simply put, TechTool Pro 3 is the most complete and powerful troubleshooting and repair utility available for your computer. Why would you settle for anything less?

MacWorld Aug. 1999

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What's HOT

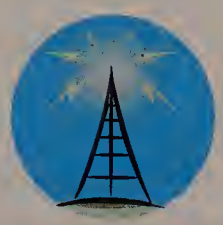
A QUICK LOOK AT THE WORLD OF TECH

1. **Napster releases a Mac version of its MP3-sharing software.** *Expect the subsequent lawsuit to lag six months behind its Windows counterpart.*
2. **Steve Jobs vows to have speedier CPUs in 2001.** *"510MHz or bust!" the cocky CEO declares.*
3. **Hackers break into Microsoft's corporate network.** *After poking around the company's secret files, the hackers added insult to injury by fixing dozens of bugs in the Windows 2000 source code.*
4. **The G4 Cube gets nominated for a design award from *PC Magazine*.** *It faces stiff competition—the Beige Box from Dell, the Beige Box from Gateway, and the Off-White Box from Compaq.*
5. **Despite U.S. woes, Apple's German division has its best year ever.** *The reason? Key lime iBooks are now called "Hasselhoff green."*

Product WATCH

UPDATED

- Tax-preparation software by Intuit (800/446-8848, www.turbotax.com): **TurboTax Deluxe**—Intuit has dropped the MacIn-Tax name—adds automated tax-return features that let users automatically download tax information from participating companies and financial institutions. TurboTax Deluxe sells for $50.
- Adobe Premiere (800/-833-6687, www.adobe.com): **Premiere 6.0** adds extended digital-video support and one-step Web-output tools. The DV-editing application sells for $349; existing users can upgrade for $149. The software will ship in the first quarter of 2001.



ANNOUNCED

- The departure of company founder and chairman Tim Gill from Quark (800/676-4575, www.quark.com): In October, Gill sold his 50-percent stake in the design and desktop publishing software company he founded in 1981. He plans to devote his time to philanthropic efforts.
- Certification of Macs for **E-Business Suite**, from Oracle (800/672-2531, www.oracle.com): Macs with Microsoft Internet Explorer, Mac OS 9.0.4, and Macintosh Runtime for Java can now access Oracle's Web-based business applications.

RELEASED

- New handhelds from Handspring (888/565-9393, www.handspring.com): The $449 **Visor Prism** features a full-color display and a rechargeable battery. The $299 **Visor Platinum** is a faster version of Handspring's handheld PDAs.
- An analog-to-DV converter from Formac Electronic (925/251-0100, www.formac.com): **Formac Studio** is a video digitizer that converts captured video and DV to DV streams, and transfers QuickTime movies to VHS. At press time, pricing hadn't been set for the product, which was scheduled for a December release.
- A FireWire tape drive from Imation (888/466-3456, www.imation.com): **The Travan 20GB FireWire Drive** comes with Retrospect Desktop Backup software from Dantz and sells for $499.—Compiled by PHILIP MICHAELS

LIGHTS...CAMERA...MP3?

Not Just for Pictures Anymore

You're vacationing on a remote desert island. You snap a couple of cool shots with your digital camera. But there's no printer in sight. If you want prints of your photos, you'll have to wait until you're back on the mainland—right?

Wrong—if you have a C211 digital camera, from Olympus (800/645-8130, www.olympus.com). The $899 digital camera includes a built-in Polaroid printer.

The C211 is just one of several new digital cameras that do more than take snazzy snapshots. "They'll probably stop calling them cameras at some point," says Ed Lee, director of Lyra Research's digital-photography advisory service.

Take the $699 Fujifilm FinePix 40I (800/800-3854, www.fujifilm.com), which lets you listen to your favorite tunes via an MP3 player while you're taking photos. "The goal is to try to go after young consumers who are into MP3 players and are looking for something fun and different," Lee says.

With the RDC-i700, Ricoh (888/742-6410, www.ricoh-usa.com) has added interconnectivity to its cameras; the RDC-i700 lets you snap pictures, check e-mail, send faxes, and track stocks. It's currently available in Japan for $1,500. A U.S. version should debut in early 2001.

What's next? Keep an eye out for digital camera–cell-phone combos, which are already available in Japan. "It may take a while to see these in the U.S. because there is a lot of infrastructure involved," Lee says.—ADELIA CELLINI

ICON ILLUSTRATIONS BY MARK MATCHO; PHOTOGRAPH BY SUZANNE ROADY

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YOUR MAC, YOUR WAY

Photography by
TONY DAVID

Customize Your Mac and Applications for a Completely Personal Experience

BY CHRISTOPHER BREEN

CAN YOU IMAGINE A PLACE WHERE AUTOMOBILES come only in black, ice-cream shops carry nothing but jamocha almond fudge, and all the Village People dressed as construction workers? Who would want to live in such a drab land?

Thankfully, our world offers myriad choices. Just look at the wide variety of Macs available to us—an indigo iMac for Ivan the librarian, marine-biologist Molly's Power Mac G4 Dual Processor, and young Lauren's key lime iBook. We are fortunate to have a great many remarkably colorful and configurable Macintosh options.

But those options don't end with the hue of the case or the amount of installed RAM. No computer—PC, Palm, or Psion—is more customizable than the Mac, whether you'd like it to conform to the way you work or simply want your desktop pattern to match your mood. Granted, the forthcoming OS X will provide the greatest face-lift the Mac has seen in over a decade. But while you're waiting for its final release,why not take matters into your own hands? With the help of a pocketful of shareware utilities, a smattering of commercial applications, and some system and application tweaks, you can make your Mac your own.

Make It Work Your Way

You may be perfectly content to dig through your Mac's hard drive to launch applications; rummage through volumes and folders in Open and Save dialog boxes; traipse to the menu bar every time you want your Mac to execute some trifling task; and repeat a series of clicks and drags to perform the same operation many times. But we're here to tell you there's a better way. These customizations are guaranteed to make your Mac more productive.

Everything at Hand

Why wait for OS X's Dock? Files, folders, and applications you routinely misplace can be easily found—and launched—with the help of some classic Mac OS utilities. (See "17 Mac Makeovers" for details about the programs discussed in this article.)

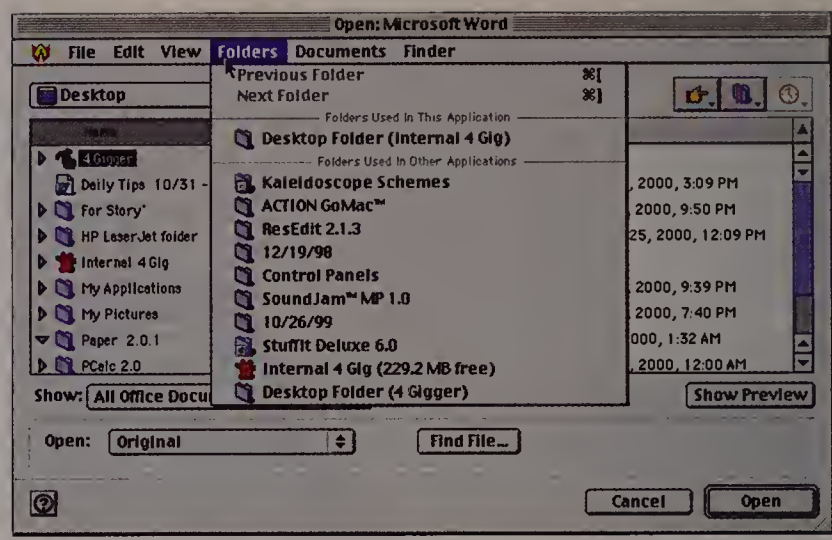
Out to Launch Included with Mac OS is Launcher, a program you can use to open applications, files, documents, and URLs with a single click. It doesn't do much more than that, though. And while you can create up to

continues

THERE IS NO COMPUTER—PC, PALM, OR PSION—MORE CUSTOMIZABLE THAN THE MAC.

eight separate categories of Launcher items (arranged as tabs), the process is hardly intuitive, and Launcher takes up a fair chunk of desktop real estate.

If you're looking for more-powerful and less-obtrusive launchers, you'll find plenty of third-party utilities that let you easily organize your favorite applications and documents into tidy, movable docks. James Thomson's DragThing 2.9 (♦♦♦½) and Aladdin Systems' like-priced DragStrip 3.7.1 (♦♦♦½; both reviews at www.macworld.com/2000/09/22/reviews.dragthing.html) allow you to place all of your favorite goodies—including applications, documents, control panels, disks and servers, folders, and URLs—in floating docks. In addition, both provide docks that, as Apple's Application Switcher palette does, display all currently running applications. Of the two, DragThing is the more refined, featuring attractive palettes, sound, hot-key support, and a number of helpful AppleScript commands for controlling the program's docks. (See "Control Tabs.")



Launch into Action Power On Software's Action Files 1.5.4 adds more-extensive navigation controls to Open and Save dialog boxes than Apple's Navigation Services does.

Space Savers Sig Software's DropDrawers 1.2.6 is another useful launching utility. Instead of employing docks, DropDrawers lets you place your favorite items, including clippings files, in floating "drawers" that open and close when you click on their handles.

You can also try Power On Software's powerful Action GoMac 2.0.3 (♦♦♦♦; *Reviews*, February 2000). Like Windows' Start menu and Task Bar, Action GoMac displays running applications and lets you launch your favorite applications and files from a palette that runs along the bottom of your Mac's screen. A unique feature allows you to quit running applications without switching to each one. Just select Quit and then the application's name from a pop-up menu, and that application quits in the background.

Let Your Fingers Do the Working Some of us dislike reaching for the mouse, either because we think it wastes time or because the ergonomics fairy has warned us against it. Two launching utilities that rely on the keyboard rather than the mouse are MindVision's MindControl 1.1 (♦♦♦♦; *Reviews*, January 2000) and Stefano Ghielmi's SpeedApp 1.0.2.

With MindControl installed on your Mac, you press ⌘-` to reveal a window that contains your favorite applications, documents, URLs, e-mail addresses, recent applications, documents, and servers. You'll also find common commands such as sleep, shut down, and restart. Use the mouse or the Mac's arrow keys to access these items.

MindControl also places a command line at the bottom of your screen where you can enter text. To launch an item on your Mac's hard

drive, begin typing the name of the item you'd like to open—or the abbreviation you've assigned to it. MindControl fills in its name; just press the return key to launch that item.

SpeedApp offers the same command-line feature in a more intuitive way. Unless you configure MindControl in the Command window, the program requires that you type the *complete* name of the item you wish to open, beginning with the first letters of the application. For example, **Adobe Photoshop** is the default name to type for Photoshop. SpeedApp—which is limited to opening applications—allows you to type any portion of the application's name.

Better Dialog Boxes

Your desktop isn't the only place you can enhance navigation. Most of us spend a fair amount of time shuffling through Open and Save dialog boxes, wishing for a more efficient way, for example, to put files in the folders where we *always* put them.

Many Mac users hoped that Navigation Services—introduced with Mac OS 8.5 as a new way to view and move through Open and Save dialog boxes—would offer a greatly expanded set of navigation options. Dialog boxes that take advantage of Navigation Services do provide quicker access to mounted volumes and often-used documents and folders, but they don't provide the wealth of navigation options found in the Finder, such as the ability to produce a file's Get Info window.

Fast Filing St. Clair Software's Default Folder 3.0.7 and Power On Software's Action Files 1.5.4 (♦♦♦♦; *Reviews,* February 2000) provide some solutions. Default Folder places additional commands in Open and Save dialog boxes—commands for producing a file's Get Info window, as well as for renaming and trashing files. It will also display a default folder you've designated when an Open or Save dialog box appears for the first time after an application launches. This is a real time-saver if, for example, you plan to save all your Microsoft Word documents in a particular folder.

Action Files offers even greater enhancements. (See "Launch into Action.") In addition to the same features as Default Folder, it gives you the ability to sort files by name, size, kind, and date; change file and folder labels; create an alias of a file or folder; and even resize these previously nonscalable dialog boxes.

More from Your Menus

Menus provide another way to easily launch applications and locate favorite files on your Mac. Each new version of Mac OS has made menus more powerful by increasing the number of keyboard equivalents for common tasks—for example, creating an alias or moving items to the Trash. But menus can be made to do more, with utilities such as Jerry Du's FinderMenuTuner 1.2.2, Connectix's CopyAgent 1.0 (♦♦♦♦; *Reviews,* December 2000), and Power On's Action Menus 1.0.2 (♦♦♦♦; *Reviews,* February 2000).

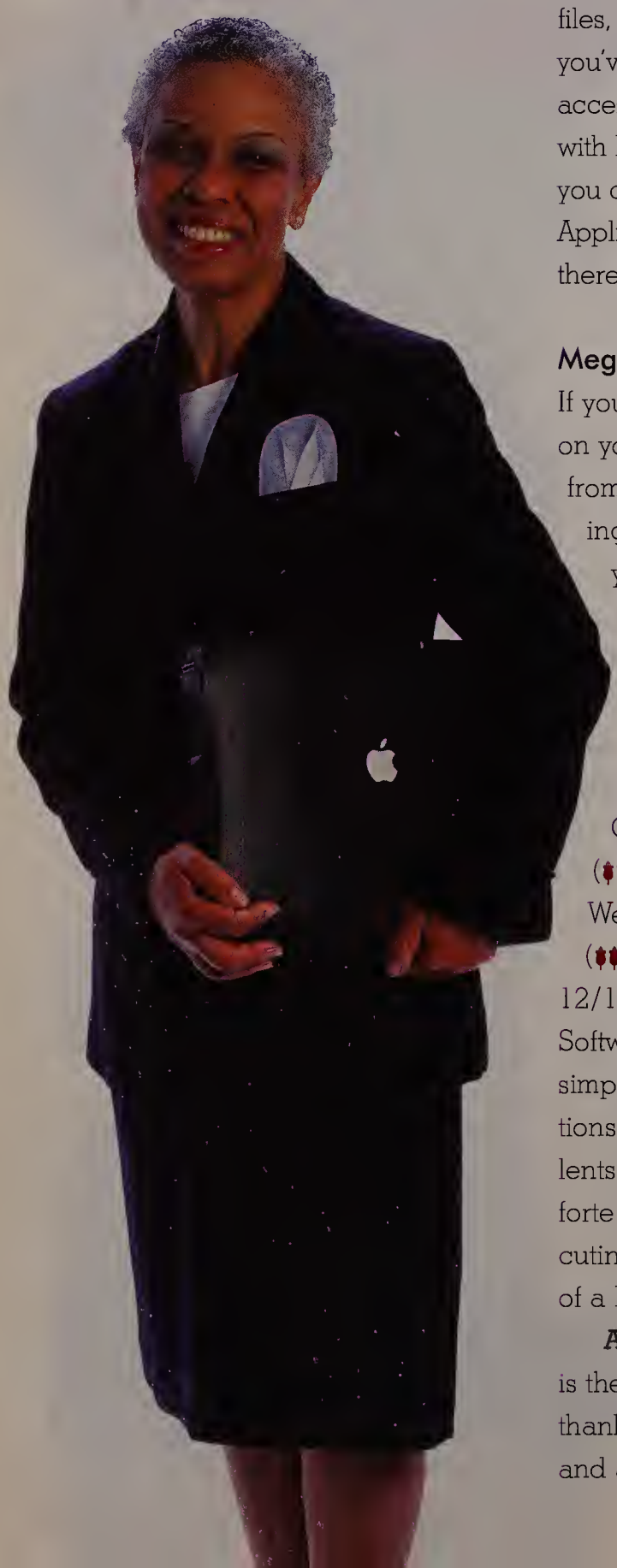
Navigate with Ease FinderMenuTuner is a simple control panel that allows you to assign additional keyboard commands to Finder menus—a boon for those who've longed to press ⌘-T to empty the Trash.

CopyAgent, though primarily a tool for enhancing Finder copying, also makes menu navigation easier with its Keyboard Power component. Using Keyboard Power, you can access Finder and application menus in the Mac's menu bar with keyboard shortcuts: for example, just hold down control-shift-F to select the File menu. Once you select a menu, you can use another keyboard shortcut to choose a command within

continues

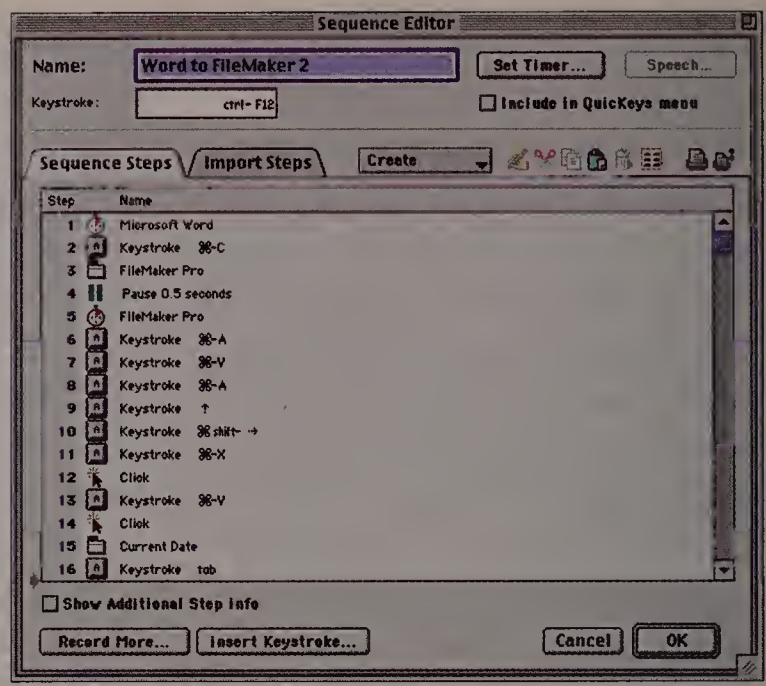
Control Tabs From James Thomson's DragThing 2.9, you can launch nearly any file on your Mac's hard drive.

WITH A LITTLE EFFORT—AND A COUPLE OF UTILITIES—YOUR MAC CAN BE FUN AND FUNCTIONAL.



that menu—such as control-shift-O to select Open—or the arrow keys to move from one menu item to another.

Action Menus is the be-all and end-all of menu customization utilities. It not only allows you to assign keyboard commands to menu items, but also creates additional menus that display applications, files, folders, and servers you've recently accessed—complete with hierarchical submenus. And you can place items in the Apple or Applications menu by dragging them there from the desktop.



Macro-Made Why repeat a series of keystrokes and clicks, when you can record these actions one time and trigger them all with a macro utility such as CE Software's QuicKeys 5.0?

Mega-Macro Programs

If you repeat some tasks frequently on your Mac—copying blocks of text from your word processor and pasting them into different fields in your database program, for example—you may long for a way to alleviate this drudgery. A macro program can automate many of these tasks. You can use applications such as CE Software's QuicKeys 5.0 (♦♦♦♦; *Reviews*, October 2000), Westcode Software's OneClick 2.0 (♦♦♦♦; www.macworld.com/2000/12/13/oneclick.html), and Binary Software's KeyQuencer 2.5.5 for simple chores (launching applications or creating keyboard equivalents for menu commands), but the forte of these macro programs is executing a series of actions at the click of a button or the press of a key.

Automate Your Actions QuicKeys is the easiest macro program to use, thanks to its icon-oriented interface and ability to accurately record the actions you perform on your Mac. Just click on QuicKey's Record button, run through the task you'd like to turn into a macro, and click on the Stop button when you're done. Your actions are recorded and ready to be played back when you press the keyboard command or on-screen button you've assigned to trigger the macro. (See "Macro-Made.")

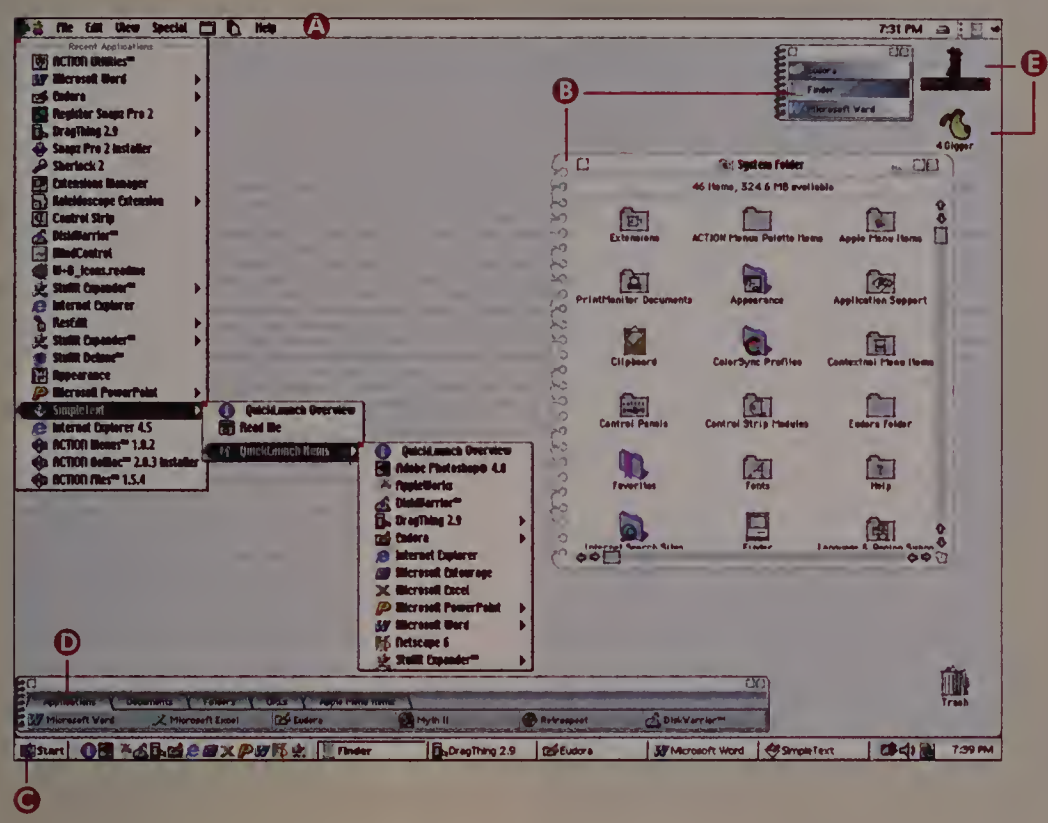
Still, QuicKeys lacks some of the power found in script-based programs OneClick and KeyQuencer, which offer better control over actions that include a series of variables—when the appearance of a dialog box triggers another action, for example.

OneClick gets its name from the palette-driven interface that represents macros as clickable buttons. Beneath the simple interface is a scripting language called EasyScript that allows you to manipulate your Mac in many powerful ways. For example, you can create a OneClick macro that automatically closes browser pop-up windows—not possible with QuicKeys.

KeyQuencer lacks the action-recording features of QuicKeys and OneClick, but its scripting capabilities allow intrepid users to create some potent macros.

The Tricked-out Mac

You've changed your hairstyle, diet, and taste in music dozens of times in the past five years. So why stick with the same-old–same-old Mac experience when you can customize it in these exciting ways?



A Action Menus
Action Menus adds a number of new menus to the Mac's menu bar for tasks such as opening recent applications, documents, and servers.

B Kaleidoscope
The combination of Kaleidoscope and Hideaki Kamada's NotePaper scheme lend a spiral-notebook feel to the Mac's windows, scroll bars, icons, and menus.

C Action GoMac
Action GoMac's Task Bar feature provides an area for launching favorite applications and for switching between active applications. The Clock Tray includes a clock, a calendar, and a place where you add control-strip modules.

D DragThing
DragThing gives you easy access to all your favorite items. And Mac OS 9's Application Switcher never looked as good as DragThing's Process Dock.

E IconFactory
IconFactory is a rich resource for beautiful and whimsical icons.

Stick to the Script Of course Apple includes its own free automation utility, AppleScript, with every copy of Mac OS. AppleScript is daunting to many Mac users, but using it to create simple scripts isn't difficult. You don't need to be a power user to benefit from this excellent tool.

Using the Script Editor, found inside the AppleScript folder within the Apple Extras folder, you can record many of the actions you take on your Mac. For example, you can create a script that will clear up the clutter on your Mac's desktop and display files in alphabetical order. First open Script Editor and click on the Record button; then switch to the Finder, hold down the option key, click on the Close box in the active window to close all windows, and select By Name from the View menu's Arrange submenu. You can then save this script to the Apple Menu or your desktop as a classic applet.

You can also create simple AppleScripts to move items into the Trash, copy files from one buried folder to another, and turn the Appearance control panel's window-shade feature on and off. (To learn more about AppleScript, see "AppleScript for the Programming-Shy," *Secrets*, November 1999.)

Make It Look Your Way

Having a more productive Mac may placate the persnickety office manager within us all, but a computer can be competent without being compelling. With a little effort—and the help of a couple of utilities—your Mac can be fun and functional.

Lovely to Look At

With the Appearance control panel, you can change the visual elements of your Mac's interface, selecting

continues

Congratulations!

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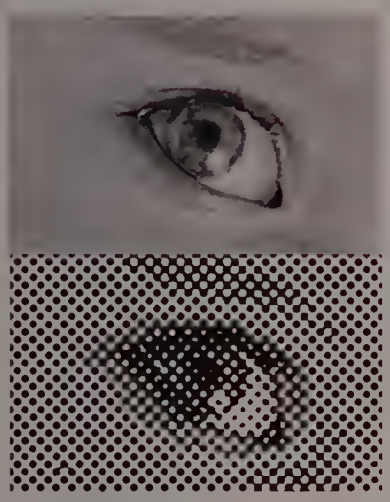
It's a 26-pound Digital Darkroom.

The Olympus P-400 Dye-Sublimation Photo Printer has arrived!

The Olympus P-400 uses **dye-sublimation technology** to produce **true continuous-tone images**, just like traditional photographs. Inkjet printers, on the other hand, can only create the *illusion* of continuous tones by using a matrix of dots. That's why **even the best inkjet printer is no match for the P-400** when it comes to image detail and color vibrancy.



Unlike typical inkjet printers, the P-400 delivers **fade-resistant images with archival qualities** comparable to traditional photographs. And while inkjet printers will test your patience, the P-400 **can output an 8" x 10" print[1] in about 90 seconds.[2]**

Olympus P-400 Dye-Sublimation Photo Printer

You won't find a more **versatile**, more **convenient** printer than the Olympus P-400. Its **parallel and USB interfaces** let you print from your favorite PC or Mac photoediting application.

Even without a computer, you can **print images directly from your digital camera's removable media**—including SmartMedia,™ Type I and II CompactFlash,® and Memory Stick®—thanks to the P-400's built-in SmartMedia and PC Card slots. Print on the spot, choosing from **numerous built-in print functions**—such as sepia-tone or black-and-white conversion, crop and enlarge, borders and vignettes.

Finally, you should know the Olympus P-400 can be yours for **under $1,000**[3]—about one-fifth the cost of competitive dye-sublimation printers of comparable output size. You can learn more at **P400.olympus.com**.

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[1]Actual image area: 7.64 x 10 in. [2]Approximate time after acquisition of data to final output. [3]MSRP: $999. All trademarks and registered trademarks are the properties of their respective holders.

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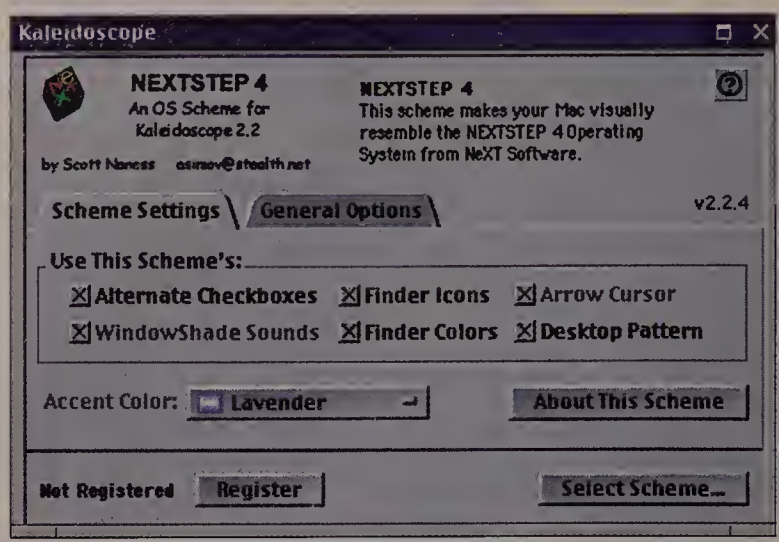

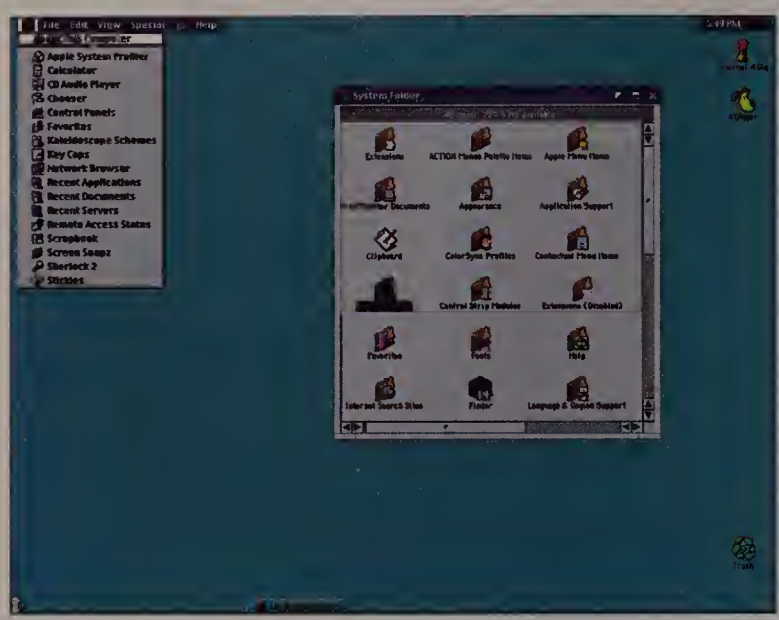

Interface-lift With Greg Landweber and Arlo Rose's Kaleidoscope 2.2.4, you can change many of your Mac's interface elements. Here, the NextStep scheme gives our desktop that retro look (bottom).

desktop pictures and patterns, alternate system fonts, and hues for highlighting and menus. But if you want to alter your Mac in more profound ways, you need greater assistance: download Greg Landweber and Arlo Rose's Kaleidoscope 2.2.4.

Total Makeover Kaleidoscope is a control panel that allows you to load *schemes* that radically distort the appearance of windows, menus, buttons, icons, and progress bars. (See "Interface-lift.") Be advised: it may impede the performance of your computer or make it more prone to crashes. But with so many entertaining scheme options available, many users will be tempted to install it regardless of the consequences.

Many authors have created schemes that transform the Mac's interface into something resembling Windows 95, the Be OS, NextStep, a Palm Pilot, or even Mac OS X. (Apple's legal department has warned against replicating OS X's Aqua theme.) Hundreds of schemes are available from the Kaleidoscope Web site (www.kaleidoscope.net) and others. To locate these additional schemes and others, use Sherlock or a Web search engine.

Accessorize, Accessorize Some Kaleidoscope scheme authors toss in icons to replace Apple's drab hard drive icons, but many do not. If you're looking for more interesting icons—whether or not you plan to use them in conjunction with Kaleidoscope—you can point your browser to IconFactory (www.iconfactory.com), the finest collection of free icons on the Web.

If you're aiming for an OS X–like look, consider one more visual enhancement: Greg Landweber's Power Windows 2.4.2. With this program installed, when you drag a window across the screen, the entire window and its contents remain visible, not just the dotted outline. Plus, it can make windows translucent.

Custom-Crafted Applications

If you enjoy playing MP3 files on your Mac, you know that MP3 players include a variety of "skins" that change a player's appearance. But MP3 players aren't the only applications that support customization.

Beautify Your Browser In the latest releases of Microsoft Internet Explorer and Netscape Navigator, Microsoft and Netscape supply the means to make their browsers reflect Apple's recent designs.

To style Internet Explorer 5 more like your Mac, just select Browser Color from the View menu and choose from colors such as Bondi blue, lime, PowerBook bronze, and graphite. To change the way icons and text are displayed in the tool bar, control-click on the tool bar and select Icon & Text, Icon Only, or Text Only from the contextual menu. Then choose from the listed colors.

Netscape 6 includes a variety of themes that allow you to change the look of this venerable browser. Preview Release 3 includes the Modern and Classic themes: Modern has a rounded look reminiscent of OS X, and Classic's appearance resembles the traditional Netscape interface. To apply a new theme, you simply select Apple Theme from the View menu and choose from the list in the submenu. This submenu also contains a Get New Themes command that prompts Netscape to connect to the Web and download any additional themes that become available.

Office Remodeling You can't radically change Microsoft Office 2001's color or icons, but some Mac users have found that the suite's Formatting palette lets you dispense with many of the program's tool bars.

To change the appearance of this palette in Microsoft Word, Excel, and PowerPoint, select Customize from the Tools menu, click on the Appearance tab, and choose either the Office 2001 Appearance option (which bears a slight resemblance to OS X) or the Mac OS Theme Compliant

continues

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17 Mac Makeovers

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CE Software	QuicKeys 5.0	$100; online, $90	800/523-7638, www.cesoft.com	Macro utility
Connectix	CopyAgent 1.0	$40	800/950-5880, www.connectix.com	Menu-navigation tool
CrossRoads Solutions	Soundz 1.0	donationware	www.nettaxi.com/citizens/shashwat	Custom-sounds utility
Greg Landweber	Power Windows 2.4.2	$10/shareware	www.kaleidoscope.net/greg/	Window-appearance–changing utility
Greg Landweber and Arlo Rose	Kaleidoscope 2.2.4	$25/shareware	www.kaleidoscope.net	Appearance-changing utility
James Thomson	DragThing 2.9	$20/shareware	www.dragthing.com	Palette-based launcher utility
Jerry Du	FinderMenuTuner 1.2.2	$15/shareware	www.dragonone.com	Menu customizer
MindVision	MindControl 1.1	$20	888/477-3269, www.mindvision.com	Command-line launcher utility
Power On Software	Action Files 1.5.4	$30	800/344-9160, www.poweronsw.com	Dialog box enhancement
	Action GoMac 2.0.3	$30	800/344-9160, www.poweronsw.com	Task-bar launcher utility
	Action Menus 1.0.2	$30	800/344-9160, www.poweronsw.com	Menu customizer, navigation tool
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St. Clair Software	Default Folder 3.0.7	$25/shareware	www.stclairsoft.com	Dialog-box enhancement
Stefano Ghielmi	SpeedApp 1.0.2	$15/shareware	http://web.infinito.it/utenti/s/sghielmi	Command-line launcher utility
Westcode Software	OneClick 2.0	$70	800/448-4250, www.westcodesoft.com	Macro utility

option (similar to the classic Mac OS). In the same window, you can choose to increase the size of icons in tool bars and in the Formatting palette.

Now Hear This

Before color displays, Mac users had few ways to tart up their computers. After all, you could create only so many interesting desktop patterns out of black and white pixels. However, one advantage the Mac had over its PC counterparts was its ability to play sounds (PCs were nearly mute back then).

Mac folk took this advantage and ran with it, creating custom sound effects and—with the help of utilities such as Bruce Tomlin's SoundMaster—linking them to events as varied as ejecting disks, emptying the Trash, and restarting the Mac.

Starting with Mac OS 8.5, Apple included the Appearance control panel, which contained a single collection of sounds tied to system events: Platinum Sounds. But CrossRoads Solutions offers us Soundz 1.0, a utility that substitutes custom sounds such as popping corks and belching for the staid set Apple includes with its OS. If you don't care for the Crazy Sounds collection included with Soundz, you can to add your own; read the documentation to learn how.

The Last Word

There are plenty of good reasons to change the ways your Mac looks and works: you can't wait for the cool new functions of OS X, you'd like a better launcher than the one supplied by Apple, or you want your Mac's desktop to match your new earrings.

Ultimately, it doesn't make a bit of difference *why* you want to customize your Mac. What really matters is that you can alter the look and feel of your Mac simply because you have the power and desire to do so. **m**

Contributing Editor CHRISTOPHER BREEN pens *Macworld's Mac 911* column and appears with alarming frequency on the compucentric cable network TechTV.

Forward *Thinking*

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	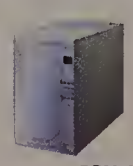				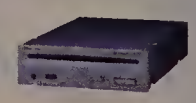	
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IT WAS LOVE AT FIRST SPLICE. From the moment you first fired up your iMac DV, you and iMovie 2 (*Reviews*, October 2000) made beautiful movies together. But now, well, maybe it's just the seven-month itch, but you think you've noticed a few imperfections. That cute little Titles Speed slider seems a tad imprecise; those effects don't seem so special anymore; and when it comes to video, the timeline definitely has a one-track mind. Face it: iMovie is stifling your artistic freedom. You need something more. • So you jump on the Web to check out Apple's professional option, Final Cut Pro. Its feature set looks great, but then you see its price: $999! Does artistic freedom have to come at such a

GO BEYOND iMOVIE

Three applications take your digital videos to the next level.

BY GALEN FOTT

high cost? • Don't despair. There are several attractive DV-editing programs that let you move beyond iMovie, without paying twenty times its price. I'll take a feature-by-feature look at three of these packages—Adobe's $549 Premiere 5.1c, Digital Origin's $499 EditDV 2.0, and Strata's $249 VideoShop 4.5.1—so you can determine which is best for your needs. Digital Origin also has a free, scaled-down program called EditDV Unplugged 1.6.1 not included in my comparison (see "Making the Cut" for details on this and the other programs in the story). ILLUSTRATIONS BY OLAF HAJEK

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Facing the Interface

Nowhere is Apple's knack for elegant, efficient design more evident than in iMovie's Aqua interface. And although none of the three applications I examined can match iMovie in the looks department, their ease of use can make up for a host of physical imperfections.

The Screen Test Working with VideoShop's Storyboard and Time views should make iMovie users feel right at home, since they function almost exactly like the Clip and Timeline viewers in Apple's program. Unfortunately, there's not much else that will remind you of iMovie's elegance. VideoShop's tiny buttons are tiresome to work with, and there are even a couple of misspellings in the interface. And unlike iMovie, VideoShop doesn't offer device control, so you have to operate your camcorder manually.

Premiere's interface is no raving beauty, but at least it functions efficiently (see "Coming Attractions" for a sneak peak at Premiere 6.0). Tools are neatly organized, and the Monitor window defaults to a professional two-view setup—with a screen on the left for working with individual clips and a screen on the right for viewing your masterpiece-in-progress.

When VideoShop and Premiere display DV footage on your computer monitor, the picture is "stretched," making all your actors look slightly fatter. Only EditDV is able to give you an undistorted view of your footage on screen. It also has by far the most professional-feeling interface of the bunch (see "iSaver"), with the overall deep gray color reducing glare from the screen.

The Final Reel Of these three applications, EditDV is the most pleasant to spend long hours interface-to-face with.

A good software tutorial is like a map—it gives you a feel for the lay of the land and doesn't completely abandon you to unknown terrain.

Help Is on the Way

A good software tutorial is like a map—it gives you a feel for the lay of the land and doesn't completely abandon you to unknown terrain. A software company can do a lot to help first-time users get oriented, and that help becomes more important as a program gets more complicated.

The Screen Test All three of these applications come with tutorials and printed manuals, but EditDV's instruction betrays its roots in Windows. When the tutorial begins "Choose Options from the View menu" and there *is* no View menu, you know you're in for a perilous journey.

VideoShop and Premiere go a step further by giving you on-screen tool tips that tell you the name of the tool you're about to select. But only Premiere gives you online help in the Help menu, which is great when you need easy access to additional information.

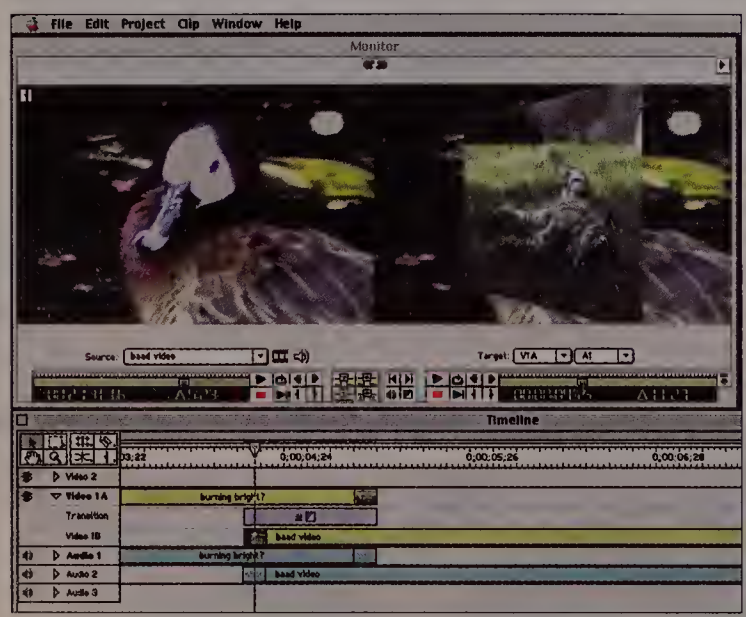
The Final Reel iMovie may not need a manual, but Premiere's complexity is matched by Adobe's efforts to help you learn the program.

Clips Galore

As you've slowly pieced together your own *Citizen Kane*, you've watched iMovie's Clip Shelf grow into an organizational nightmare. Editing software should help you put your hands on just the clip you need *when* you need it, and each of these programs offers improvements in that area.

The Screen Test Within VideoShop's Bin window, you can organize clips into folders. The Bin window also boasts a nifty feature called Micons, tiny animated previews of your clips. It's nice that you can rename clips inside the Bin window—but it would be nicer still if the program remembered those names the next time you opened the project.

In Premiere, clips are stored in the Project window and sorted into bins.



Track Team In Premiere, the A and B video tracks can share basic cutting duties.

Double-click on a bin, and it opens in its own window. If you want to use a set of clips from your current movie project to construct a trailer in a new timeline, Premiere offers project-independent bins called Libraries.

EditDV's approach is almost identical to Premiere's, but its implementation is a little tidier. Clicking on a bin from the list on the left side of EditDV's Project window reveals a list of contents on the right. The handy Clean Up Bin command can free up precious disc space by deleting all the clips you wind up not using. EditDV doesn't offer a library feature, but a far better solution for all three programs would be to allow for multiple timelines within one project.

The Final Reel EditDV offers the neatest solutions for calming the chaos of your creative process.

Tweaking the Timeline

If you thought using iMovie's Paste Over command was sophisticated editing, wait until you learn about slipping, sliding, rippling, and rolling. These may sound like activities in a water park, but they're actually invaluable techniques for adjusting clips in a timeline to help synchronize them with your audio track.

The Screen Test VideoShop offers rolling edits, but working in the program can otherwise be very awkward. If you want simply to drag through the timeline to review your work, you have to either hold down the option key or move the scroll box in the bottom navigation bar of the Timeline window.

Premiere offers an intuitive approach to basic editing that makes strong visual sense (see "Track Team"). Transitions go in the Transition track, snapping to fill the amount of overlap between the clips in the A and B video tracks (to transition between clips, they must be in opposite tracks).

EditDV also has a dual view—similar to a method used in analog editing—but most editing in the program is done in one track, as in iMovie. You can also collapse Premiere's A and B tracks and work with them combined.

> Think using the Paste Over command in iMovie is sophisticated editing? Wait until you learn about slipping, sliding, rippling, and rolling.

The Final Reel It's hard to choose between Premiere and EditDV when it comes to basic editing. Premiere has a tool for every conceivable purpose, but EditDV's more streamlined approach works quite well without them. EditDV has more options for speedily rendering previews, but Premiere's multiple-undo capability gives you greater flexibility.

iSaver EditDV's subdued interface is easy on the eyes.

Sweet Sound

Although every picture tells a story, good sound can make that story flow better. With two audio tracks (in addition to the one stored in the video track) for aurally embellishing your movies, iMovie is surprisingly capable in the sound department. Still, adding more tracks can give you even greater opportunities for rich, multi-layered audio.

The Screen Test VideoShop offers an unlimited number of audio tracks, as well as a nifty program called TuneBuilder that can create generic musical soundtracks in various styles. Audio fades are controlled in VideoShop by dragging points to stretch a horizontal line that represents the clip's volume. Unfortunately, VideoShop's implementation of this *rubber banding* technique needs a lot of work; the points lurch suddenly when you try to drag them, and you can adjust volume only in 20-percent increments.

EditDV gives you as many as 20 audio tracks, and like many features in the program, audio control is effect-based. Only after applying the Sound Fade filter do you get access to the program's precise rubber banding.

But both VideoShop and EditDV

continues

stand in the long shadow of Premiere's audio capabilities. Premiere lets you rubber band both volume and stereo panning, and it gives you strong control over the quality of your audio with excellent filters for equalization and reverb.

The Final Reel Premiere's audio capabilities are top-notch, and that's important when you consider that sound usually makes up half of your movie.

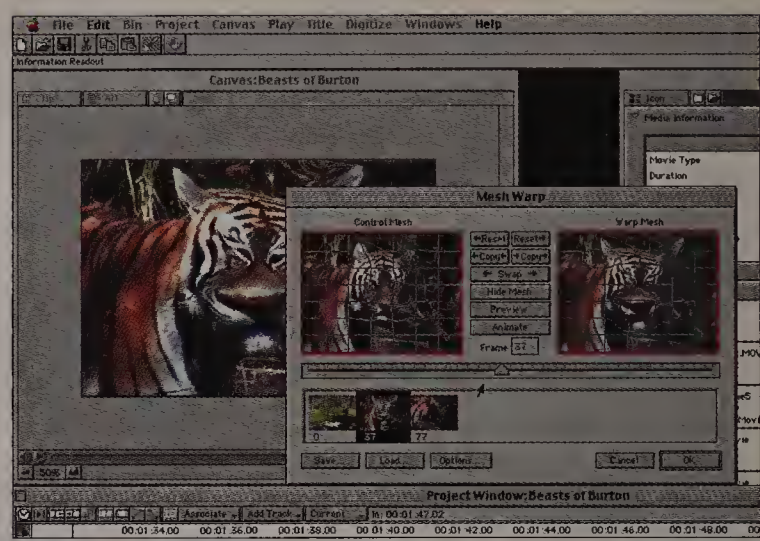
Lots of Layers

Just as multiple audio tracks let you hear more than one sound at a time, multiple video tracks make it possible to see more than one clip at once. This technique of layering images simultaneously on screen is known as *compositing*. You see a form of compositing when your local news broadcast uses a blue screen to place the weather forecaster in front of a weather map. Multiple video tracks open up a world of creative opportunities for you to explore.

The Screen Test Creating a picture-in-picture effect with VideoShop couldn't be more intuitive: just grab a clip by the corner in the Canvas window to resize it. If you want to animate your clip to move across the screen, you can draw a motion path in the Canvas window. Unfortunately, superimposing isn't nearly as well implemented, since changes in opacity are controlled with VideoShop's cantankerous rubber bands.

Premiere's Motion dialog box is uncharacteristically clunky. When you apply the Motion settings, you automatically animate the layer, even if you wanted only to shrink it down for a stationary picture-in-picture. You have to cancel this animation each time you apply Motion settings—not a one-click process—before you can proceed.

EditDV's filter-based approach to compositing gives you terrific control. The Picture-in-Picture filter lets you adjust opacity with a simple slider, and the Pan-Zoom-Rotate filter makes it easy to tilt your clips at extreme angles, with built-in drop shadows for realistic depth. The best thing about EditDV's compositing is that it allows you to set animation keyframes directly in the timeline, so synchronizing the timing of your various video elements is a snap.



A Fine Mesh VideoShop's Mesh Warp filter lets you put a cruel twist on reality.

The Final Reel Compositing abilities are the best reason to move beyond iMovie, and EditDV is the clear winner in this arena.

Just for Effect

If you downloaded the free Plug-in Pack for iMovie 2, you probably filled your family-vacation footage with every fade, wash, and dissolve in your palette, making your final cut a visual mess. Having more options to choose from brings a chance for more variety, but with it comes the responsibility to use those effects with discretion (see "Tempting Text"

continues

Making the Cut

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Apple	iMovie 2	♦♦♦♦½	$49	800/692-7753 www.apple.com	10	1	3	12**	13**	0	No
Adobe	Premiere 5.1c	♦♦♦♦	$549	888/724-4508 www.odobe.com	32	99	99	82	89	21	Yes
Adobe	Premiere 6.0 (beto version)	N/A*	$549	800/724-4508 www.odobe.com	99	99	99	66	75	21	No
Digitol Origin	EditDV 2.0	♦♦♦♦	$499	800/572-3487 www.digitolorigin.com	1	Unlimited	20	29	24	4	Yes
Digitol Origin	EditDV Unplugged 1.6.1	♦♦♦♦	Free	800/572-3487 www.digitolorigin.com	1	1	2	9	13	2	No
Stroto	VideoShop 4.5.1	♦♦♦	$249; with XLR8's InterView, $99	800/787-28231 www.stroto.com	1	Unlimited	Unlimited	51	63	2	Yes; with InterView, no

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at www.macworld.com/2001/02/features/text.html).

The Screen Test EditDV offers the least temptation in this respect. Although its 29 effects and 24 transitions may sound like a lot, they're slim pickings compared with the effects in the other programs. EditDV's transitions and effects are quite flexible, and after you've edited one in the timeline, you can drag it to the Effects window and save it there for reuse. While this is a handy feature, it would be nice if Digital Origin had done some of this work for you by creating more presets.

Effects are VideoShop's strong suit, with some very sophisticated filters that are usually found only in applications such as Adobe After Effects (see "A Fine Mesh"). In addition, VideoShop has the ability to map your video onto animated 3-D objects.

Premiere ships with a staggering 82 video effects and 89 transitions. Although numbers don't tell the whole story, Premiere's effects generally look excellent in the final render.

The Final Reel Premiere and VideoShop are both excellent choices if you're looking to spice up your favorite footage.

The Last Word

VideoShop isn't in the same league as Premiere and EditDV, but it costs only about half as much. (A version without the printed documentation comes bundled with XLR8's $99 InterView [770/564-5682, www.xlr8.com], a USB device that digitizes analog video and audio.) VideoShop is a big step up from iMovie in areas like compositing and effects, but in too many ways it's a step down—for example, in ease of use and device control.

That brings us to the real contest here, and it's a close one: EditDV versus Premiere. EditDV is an extremely capable professional editing program, and it's slightly less expensive and more streamlined than Premiere. If you have editing experience with a program other than iMovie, you should give it a try. But if you're looking for the heir apparent to iMovie, Premiere has a slight edge with its intuitive interface and excellent Help options.

So if you're ready to take your movies—and editing skills—to the next level, now is a great time to invest in your cinematic future. **m**

GALEN FOTT (www.grundoon.com) is the director of online development for Total Training, Inc.

Coming Attractions

As we went to print, Adobe was wrapping up production on Premiere 6, the latest sequel to the company's popular editing application. Having screened a prerelease version of the program, I can give you a sneak preview of this highly anticipated release.

The Web has obviously had an impact on moviemaking, and one look at the the new Save For Web command proves Premiere isn't just for QuickTime anymore; you can also export your movies in Windows Media and RealMedia formats. Another intriguing feature lets you embed Web links into streaming video created with Premiere 6. When the video reaches the link during playback, it triggers the opening of a related Web page in another window on screen.

Premiere 6 boasts many new organizational features, including a revamped Project window that bears more than a passing resemblance to EditDV's. And Premiere's video and audio filters have moved out of the sprawl of pull-down menus and into nice new palettes of their own.

In other improvements, Adobe has cleared up a problem that made DV footage appear distorted on screen. Premiere's new Storyboard window lets you quickly rough out a sequence for your clips, much as you can in iMovie's Clip Viewer. Premiere's audio capabilities are strengthened with the new Audio Mixer, which gives you a virtual mixing board for adjusting volume and stereo panning. And Adobe Photoshop's History palette makes a surprise cameo appearance in Premiere 6, allowing you to easily travel back in time through 99 undos.

Premiere 6's Motion dialog box is virtually unchanged from the previous version's—but who needs it when you've got After Effects filters at your disposal? Premiere 6 ships with more than 25 filters from Adobe's compositing program; they're implemented in the new Effects control palette and the timeline's keyframe interface. The bunch includes the Transform filter, which is a sort of mini–After Effects, letting you control a clip's position, rotation, scale, and opacity.

Adobe is expecting Premiere 6 to have a strong opening weekend sometime in the first quarter of 2001, with admission prices set at $549.

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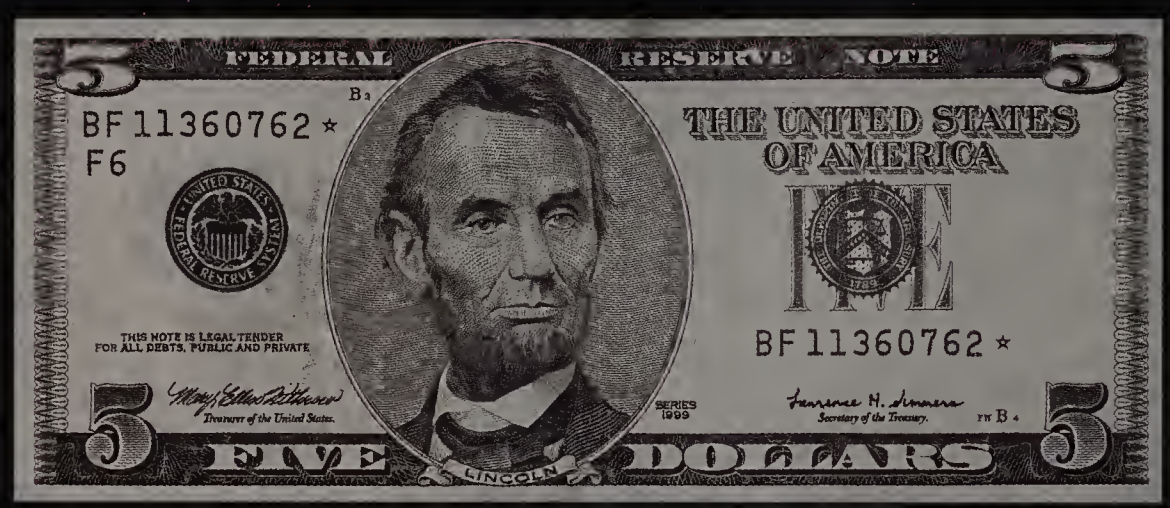

Yes, this is actually money. It got redesigned a couple of years ago.

This is your mom and dad. By the way, you have a little brother now. (His name is Steven.)

2000 M[illegible] edi[illegible] In[illegible] A[illegible] ugh[illegible] r[illegible] ed M[illegible] r[illegible] di[illegible]

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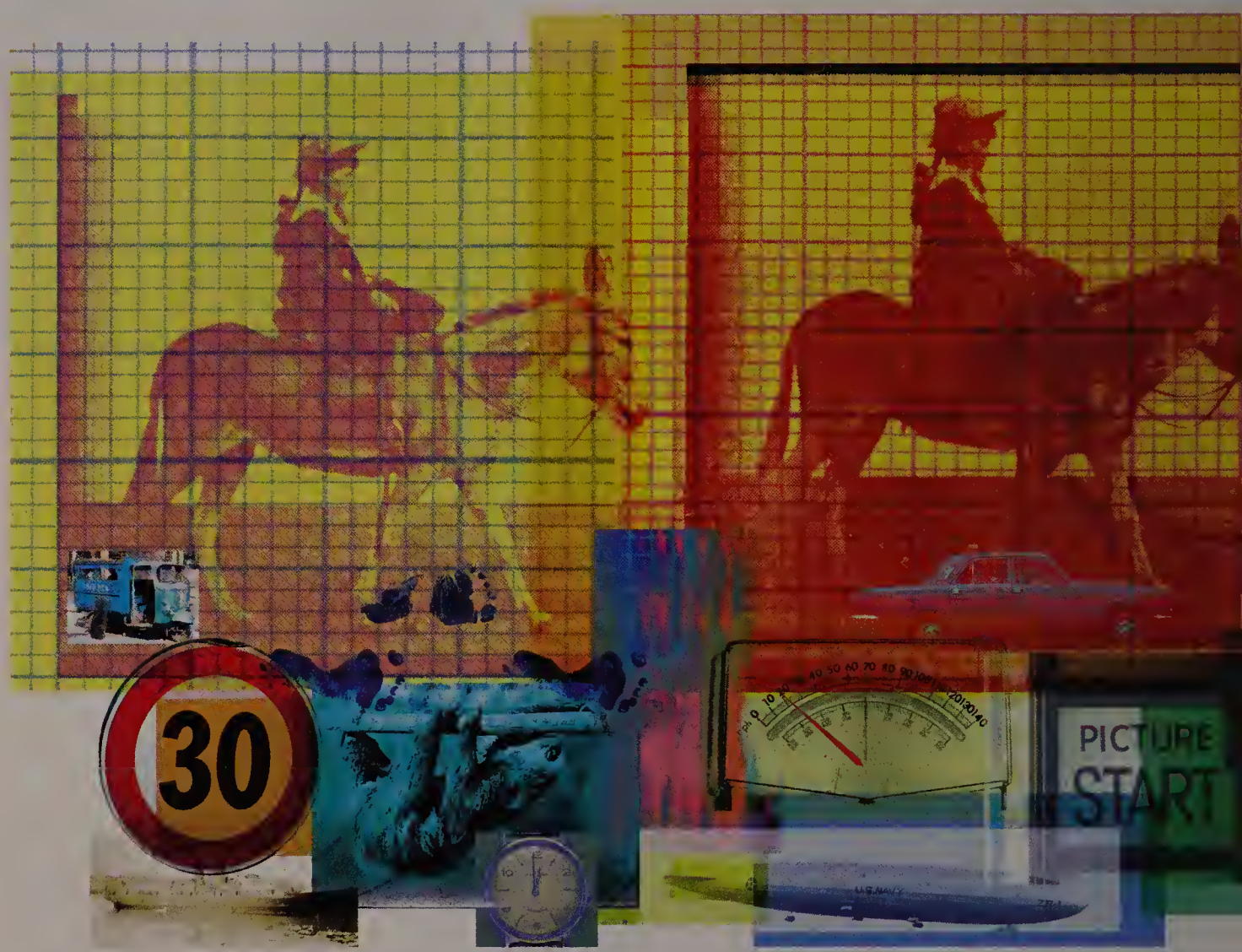
FLASH



TIPS AND TRICKS FOR ADDING POWER AND

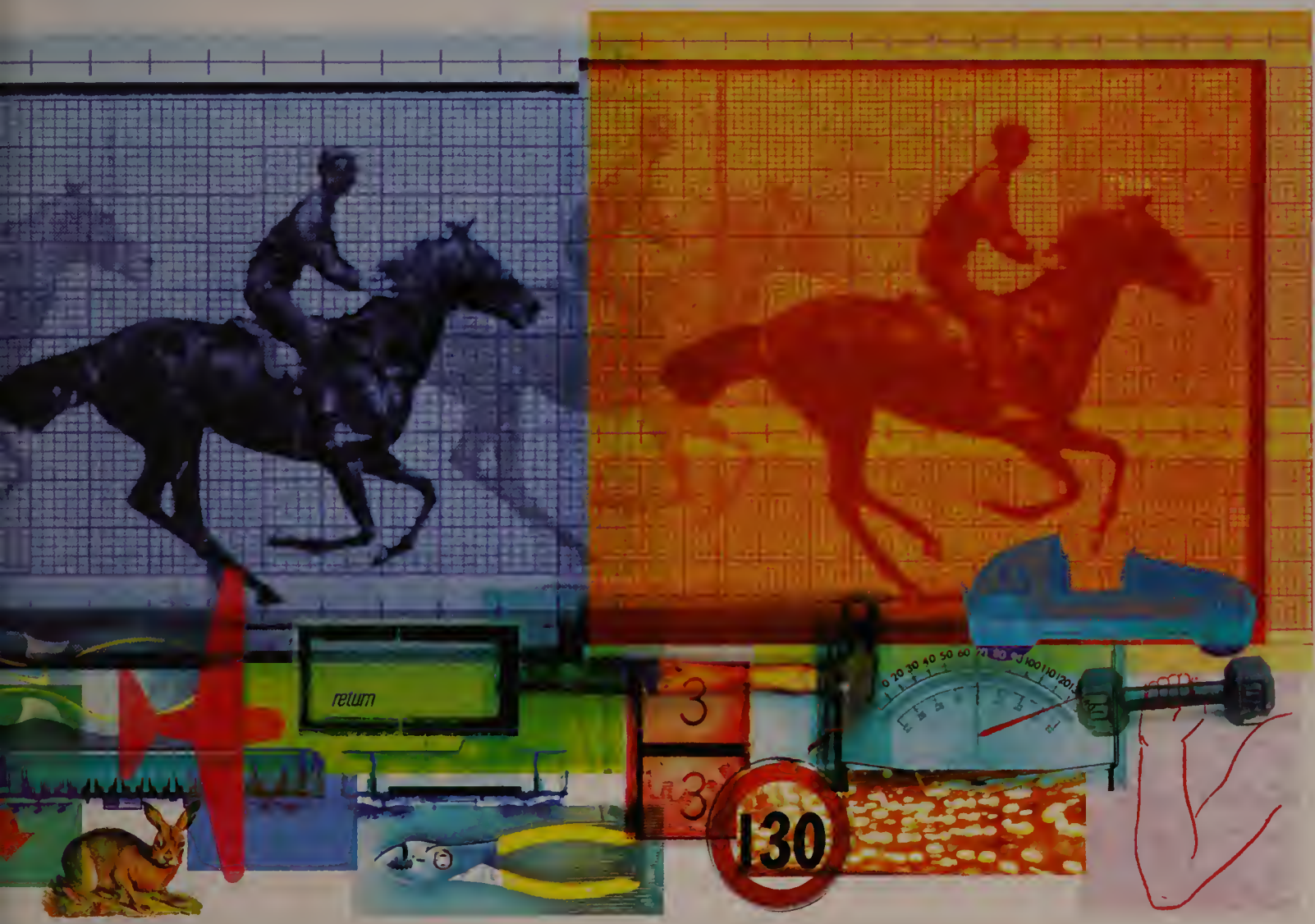
IN THIS SECTION:

70 TAKE CONTROL OF FILEMAKER PRO
74 FREE YOUR FONTS IN QUARKXPRESS
78 QUICK AND EASY WEB-SITE PLANS

There's no doubt that Macromedia Flash has helped create some of the most memorable sites on the Web. No other program delivers such attractive animation, engaging interactivity, and synchronized sound. So it's a shame that using Flash to *build* Web sites can be such a frustrating experience. Flash's unintuitive interface, click-intensive dialogs, and limited scripting support have been known to inspire a love-hate relationship

H 5

EXPERT GUIDE



MARGARET RIEGEL

SPEED TO YOUR SITES

between the program and developers. Sure, you can do amazing things in Flash—but it isn't easy.

Macromedia is hoping to provoke a little more love and a little less hate with the release of Flash 5, a total overhaul of the program. Almost every corner of the program sports changes—many of them significant—including a streamlined interface, new drawing tools, expanded site-management features, and newly unleashed programming power. Here's a look at how these new tools and refined features will have you working faster and smarter. **BY PHILLIP KERMAN**

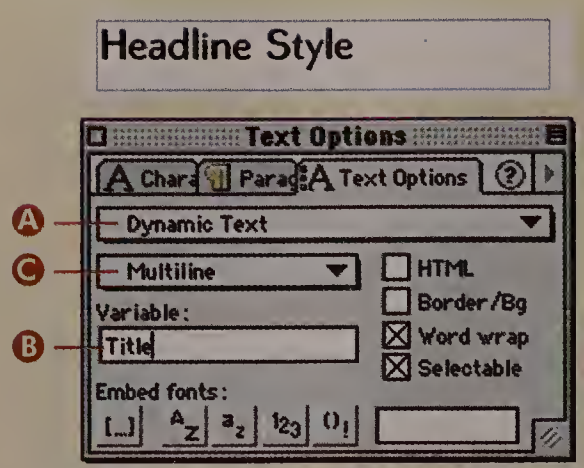
PERFECT YOUR STYLE

You can use Flash 5's Smart Clips to impose consistency on often-used movie elements such as type styles. Once the clip is created, team members can simply enter text into the appropriate parameters window without worrying about the font or size.

How-to

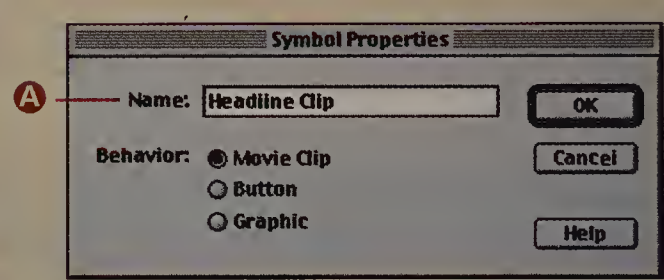
1

Set Your Style First construct the text on which you'd like to base your style. In the Text Options panel, select Dynamic Text from the first drop-down menu Ⓐ. Type a name such as **Title** into the Variable field Ⓑ. If the text may not always fit on one line, be sure to set the line type to Multiline Ⓒ, and select the Word Wrap option to accommodate the extra length.



2

Convert to Symbol Select the block of text with the arrow tool. Open the Insert menu and select Convert To Symbol (or press F8). In the Symbol Properties window enter a name for your clip Ⓐ. Make sure the Behavior is set to Movie Clip. Click on OK.



Flash Makeover

Although you can use Flash to create beautiful and engaging Web interfaces, the program can be a nightmare to navigate. If you've ever looked for your library under the Libraries menu (it's not there) or tried tinting several movie clips at once (you can't), you know why Flash designers complain bitterly about the program's interface. Flash's face-lift adds dozens of subtle enhancements to simplify and speed up even the most mundane tasks.

A Familiar Face One of the most striking changes in Flash 5 is its look. Macromedia has retooled the program's interface to make it more consistent with almost all Macromedia products. This will make it easy for new users to apply knowledge across programs.

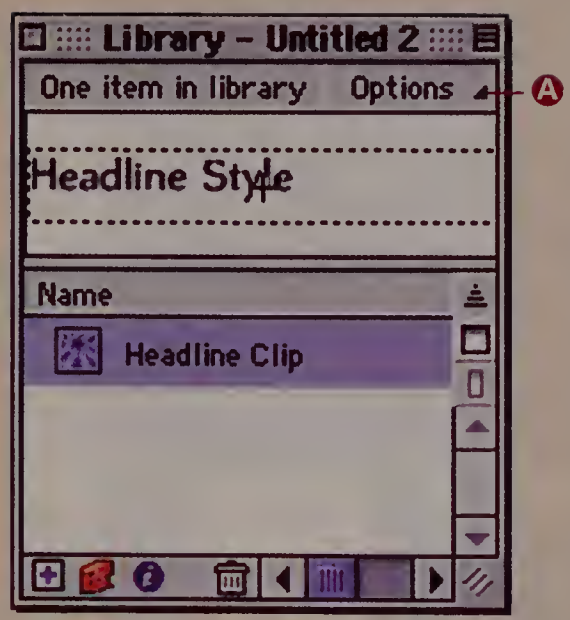
In addition to being easier to learn, the new interface is also more efficient—thanks in large part to the near elimination of Flash 4's clunky modal dialog boxes. The most-common controls and settings are now housed in *panels*, tabbed palettes that remain on screen. While modal dialog boxes had to be opened each time you needed to change an object's setting (a very click-intensive process) and closed before anything else could be done, panels let you inspect and modify several objects at once. This will save you valuable time on almost every task—from changing the font in several blocks of text to modifying the alpha level of everything on the stage.

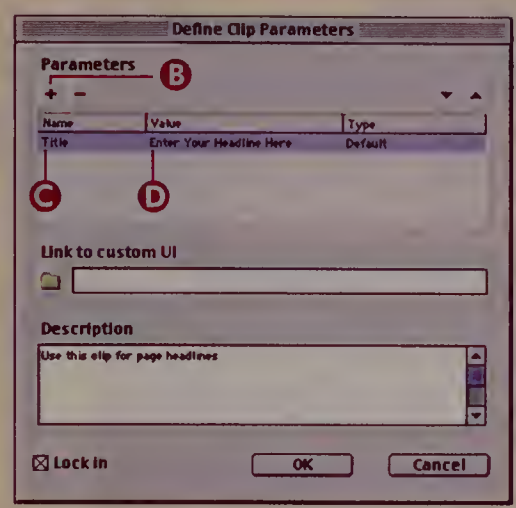
Macromedia has also tweaked Flash 5's timeline, which users are likely to find more intuitive than the old one. For example, you can now extend a layer simply by clicking and dragging its end. In the past you had to click once, wait for the cursor to change to a box, and then click and drag. Realizing that the new timeline may frustrate Flash users accustomed to the old way of working, Macromedia has provided a preference setting that lets you view the timeline as in past versions.

Controlling Fine Lines Designers who cringed at Flash's unusual drawing method will appreciate Flash 5's new pen tool—a standard feature in most vector illustration programs. In previous versions of Flash, designers employed a drawing method called *vector clay*—bending and extending shapes to mold illustrations. This organic drawing process made many

3 Define Parameters

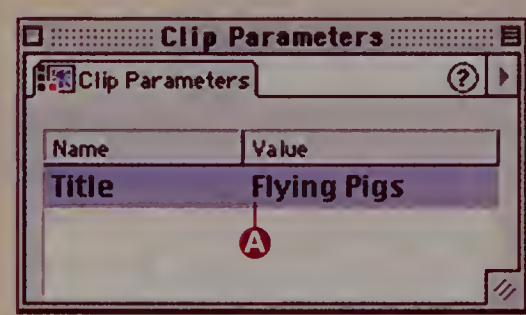
Next you need to specify which variables the authors will supply for the clip. Open the Library window from the Windows menu and select the new clip. Then choose Define Clip Parameters from the Library's Options menu Ⓐ. In the Define Clip Parameters window, click on the plus-sign (+) button Ⓑ. Under the Name column Ⓒ, select varName (by double clicking on it), and replace it with the variable name you created in step 1 (**Title**). In the Value column Ⓓ, you can add instruction such as **Enter Your Headline Here**. Click on OK.





4 Put Your Clip to Work

You can now drag instances of your Smart Clip anywhere in your movie. To populate the text, open the Clip Parameters panel (located in the Windows menu under Panels). Enter the text of your headline in the Value column Ⓐ.



Note: You won't actually see your new headline on the stage. To view the new text, open the Control Window and select Test Movie.

How-to

professional designers who were familiar with Adobe Illustrator and Macromedia FreeHand feel out of control—if not downright queasy. The new pen tool lets designers draw and shape objects in a very controlled manner using Bézier handles. Macromedia not only added a pen tool but also integrated it, making it completely compatible with the vector-clay drawing style of Flash. Shapes drawn with the pen tool can be modified with precise Bézier handles, or by simply bending shapes and extending points. Likewise, you can modify anything you draw with the paintbrush or pencil tool using the pen tool's Subselect option.

While many designers will welcome the addition of the pen tool, Flash 5 still has a long way to go before it matches the powerful drawing features of professional illustration programs. Earlier versions of Flash attempted to bridge this gap by allowing users to import native Adobe Illustrator 6 files—a limiting option, considering that Illustrator is currently at version 9. In Flash 5, Macromedia has focused its efforts on improving integration with its own illustration program, FreeHand. You can now import native FreeHand (version 7 or later) documents into Flash 5. This means that an artist on your team can create complex graphics in FreeHand and simply send you the finished files for direct import into Flash. (If you use Illustrator, you'll need to export your document as a *.swf* file—a feature built into Illustrator 9 and available to earlier versions with the help of the free Flash Writer plug-in from Macromedia.)

The FreeHand Import controls make it easier to repurpose print content for the Web—leaving you with fewer files to maintain. For example, you can lay out a multipage brochure using FreeHand and then open the file in Flash. Flash doesn't have "pages," so after importing a FreeHand file, you can selectively map pages into separate keyframes (for images to appear sequentially) or into separate scenes (to use the graphics in distinct sections of your movie). You can also choose to distribute FreeHand's layers to individual Flash layers or to keyframes (see "A Helping Hand"). These options allow you to retain more attributes of the original FreeHand file. This is a giant step toward seamless integration of Flash and FreeHand.

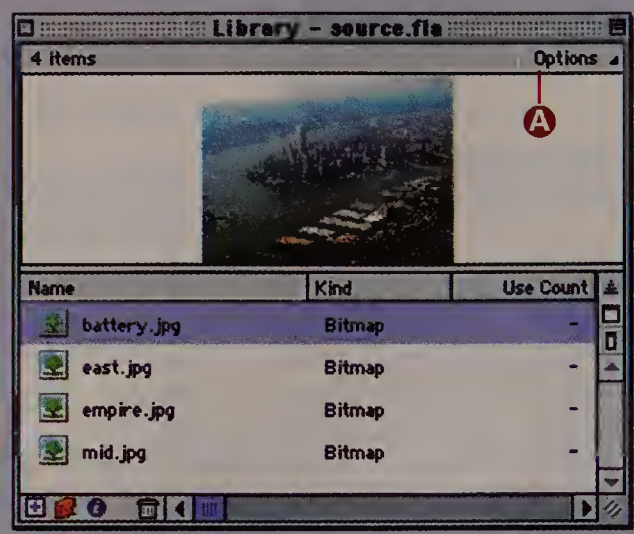
continues

SHARING THE WEALTH

Maintaining consistency throughout large and complex Flash projects is easy if you have a shared library. This public repository lets you share common movie assets and ensures that everyone is working with the latest version of elements.

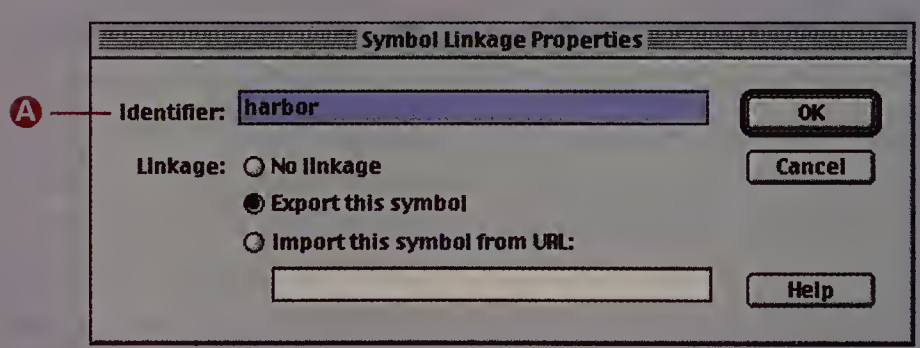
1

Set Library Linkage Start with a document that contains the library you want to share. Select a library item, and choose Linkage from the library's Options menu (A). This will force Flash to export the item.



2

Name Your Assets Give each item a unique identifier name in the Identifier field (A). If you want to replace the shared item later, you'll need to make sure your replacement uses the same identifier. Repeat this process for every item you want to include in your shared library.



3

Export the File Save the Flash file under the name Shared. Then open the Control menu and select Test Movie to export the file. This will create a file called Shared.swf. Anyone can now select Open As Shared Library from the File menu in his or her Flash file to link to and use the shared Library.

Engine Overhaul

Despite its significant interface changes, Flash 5 isn't all about looks. Aiming to please one of its most demanding groups of customers—programmers—Macromedia also took a hammer and monkey wrench to the inner workings of Flash, adding a level of flexibility and power previously missing from the program. Sure, you could create amazing Web sites in Flash 4—but that's like saying you *could* build a house out of toothpicks. It's possible but not easy. Pushing Flash 4's limited scripting capabilities beyond the simplest of tasks required a resourceful nature and a host of complicated workarounds. Flash 5 now addresses this problem—its new scripting tools and improved text controls provide enough power and flexibility to make even the most control-hungry users smile with glee.

Getting Up to Code The most profound technical change in Flash 5 comes in the form of an entirely overhauled programming language. Introduced in Flash 4, the original ActionScript was something experienced programmers called a "language" only while snickering. Key components of any programming language are functions—and Flash 4 had only a handful. Worse, there was no way to create your own. Instead of writing lines of code, you simply selected preset Actions such as **Go to** and filled in parameters (such as **Go to frame 1**) from a pop-up menu. Though Flash 4's ActionScript was very approachable for novices, experienced programmers felt hampered. Even programming simple tasks, such as exchange-rate calculation, required complex and funky workarounds.

Flash 5 puts power back in the hands of programmers, letting them turn off structured guidance by

continues

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selecting Expert mode in the Actions panel and then typing code directly into a window. (The guided method of writing scripts is still available in Normal mode.)

The new ActionScript has been extended to a true object-oriented programming language. What's better, the retooled ActionScript is now based on the same standard as JavaScript. Although ActionScript contains a few unique attributes specific to Flash—for example, what Flash calls **(on (roll over)** JavaScript calls **onMouseOver**—the syntax and structure of the code are the same.

Now that they have a true programming language at their disposal, Flash users can control their code. Functions, such as the currency-exchange calculator, that used to require three or four lines of needlessly complex code can now be accomplished in one. And because no one writes perfect code, Flash 5 even includes the Debugger feature, which displays code while your movie is playing to help you identify and weed out programming errors.

Broadening Horizons The improvements to ActionScript in Flash 5 give experienced programmers the power to create sophisticated programming tasks that were previously impossible. In the past, you could apply scripts only to frames and buttons (making your movie loop or jump to a new URL, say). But in Flash 5, you can place scripts on Movie Clip instances—so you can write scripts that respond to events (called Clip Events) that formerly went unnoticed.

More Info:
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Learn how to create animations with motion and shape tweens.

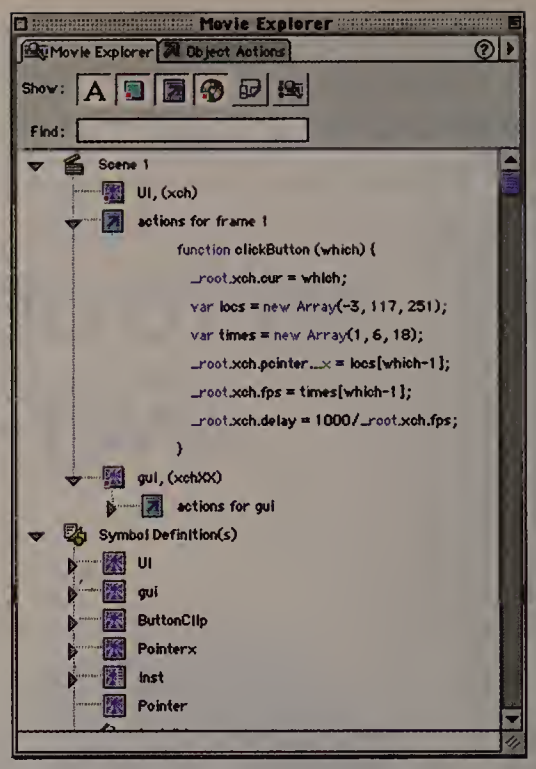
LINKS

For example, you can make a running movie clip appear to float across the screen by using the **enterFrame** event to push a movie clip one pixel to the right each time a new frame loads.

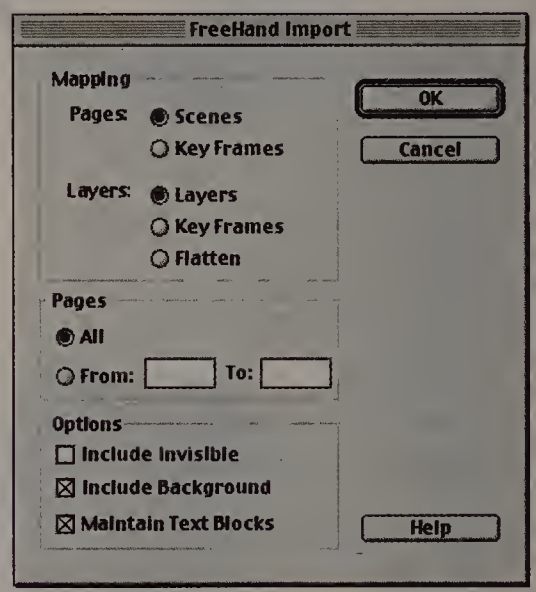
Looking Smart If you aren't quite ready to become a programmer, Flash 5 also offers ways to insulate yourself from code while still taking advantage of powerful interactivity features. The best example of this is Flash 5's Smart Clips—prefabricated, sophisticated code snippets that can be shared and recycled. One sample Smart Clip that ships with Flash lets you automatically create pop-up menus. All you have to do is select the Menu Smart Clip and enter the menu items in the Clip Parameters window. You never need to get your hands dirty in the code.

Only a few Smart Clips ship with Flash 5. What makes the Smart Clips feature truly powerful is that you can create your own, greatly simplifying the construction of Flash files. Programmers can create custom Smart Clips for reuse by others. Say you have a Movie Clip of a bouncing-ball animation. You can turn it into a Smart Clip that lets the author specify how many times it plays—or bounces. A Flash designer can then drag this custom Smart Clip onto the stage and set it to bounce five times. Later he could drag out another instance and make it bounce only twice. The same code is used in each instance, but with different parameters. And since the code is centralized, Smart Clips are easy to maintain. If you find a problem, you have to fix it in only one place. This flexibility makes customized Smart Clips great for creating repetitive and graphically consistent elements for your Web site—such as type styles (see "Perfect Your Style").

Dynamic Text Not all of Flash 5's geek-pleasing enhancements involve



Flash in a Haystack Movie Explorer maps out every asset in a Flash movie, helping you decipher even the largest Flash sites.



A Helping Hand FreeHand's import options let you control how your layers and pages are distributed to Flash.

programming. Macromedia has also added a surge of power to the program's text-handling features. Flash 5 now offers basic HTML (1.0) text formatting, in addition to traditional antialiased display type. This makes it easy to reuse text from an existing Web page without reformatting it. But the true power of HTML text comes into play with dynamically updated Flash sites. Regular Flash display type becomes locked once the movie is exported. But with HTML-formatted

continues

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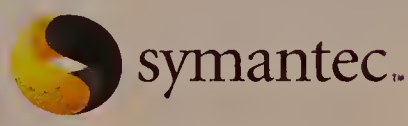

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files, it's easy to make Flash content automatically update or change formatting while a user visits your site. And now you can put a link right inside your dynamic text instead of carefully positioning an invisible button over the word.

Missing the Flash It's worth noting that Flash 5 is not entirely backward-compatible. While you *can* use Flash 5 to create a movie that works in the Flash 4 player (which has a huge install base), you won't be able to use many of the newest and best scripting features, such as Smart Clips and HTML text. To help you remember which scripts are off limits, Flash 5 highlights the scripts in the Actions panel when they're unavailable in the format to which you're publishing. This is an improvement over Flash 4, in which you could deliver to Flash 3 but you had to know from experience which features were off limits.

Crowd Control

More and more, designers and programmers are collaborating to build large Flash projects. This team effort can produce a unique set of problems. Working in teams requires that everyone be able to work simultaneously and, if need be, take over other parts of the project at a moment's notice. However, working simultaneously is impossible if there's just one master file. And making sense out of team members' Flash files can be more difficult than finding where they keep the silverware in their kitchens. Luckily, Flash 5 now addresses many of these productivity issues.

Getting Noticed Large and complex Flash files tend to get unwieldy. If you've ever had to update a large file you programmed a long time ago, you probably found it easier to just start over. And forget about trying to edit someone else's work! You'd have an easier time hacking into the CIA's computer system.

Flash 5's new Movie Explorer can help navigate complex projects by creating a visual map of the whole file—including fonts, graphics, and scripts (see "Flash in a Haystack"). Its hierarchical view lets you sort, print, and even jump to any part of your movie; it's a great tool for making small tweaks to large movies. You can use the Movie Explorer to quickly find and change every instance of a particular font—a huge time-saver.

Learning to Share Working with multiple designers often means working with multiple design styles. But without strong graphic consistency, a Web site can wind up looking sloppy and unprofessional. Imposing a standard style requires keen attention to detail; making sure every member of a group has the correct and updated versions of fonts, images, and other movie assets is a challenge.

To keep all team members on the same page, Flash 5 allows groups to access a shared repository of elements. This shared library can include images, movie clips, fonts, and even Smart Clips. And just as regular Flash libraries store the media once, no matter how many times you recycle an item, team members need to download the contents of a shared library only once, which keeps files compact. If a shared library item is edited, the change is automatically reflected in every file linked to that library. For example, if you add rounded corners to a button in the shared library, you'll see that change everywhere the button is used. This ensures consistency even as the design changes. (To learn how to create a shared library, see "Sharing the Wealth.")

The Last Word

Flash 5 is built for productivity and power. Its new features and enhancements make it more efficient, more flexible, and easier to maintain. Flash 5 won't start making Web sites for you, but it will definitely make the job much easier. Although Flash veterans may at first be put off by some of the changes, once they get over the initial shock and adapt to these ways of working, they're sure to find plenty to keep them satisfied. And every minute invested in learning a new approach will be paid back in hours of saved time. **m**

PHILLIP KERMAN, author of *SAMS Teach Yourself Macromedia Flash 5 in 24 Hours* (SAMS, 2000), conducts Flash training workshops around the world. Archives of his free newsletter are available at www.teleport.com/~phillip/newsletter.

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SCOTT LOVE

Take Control of FileMaker Pro

Built-in Scripts Help You Automate and Customize Your Databases

How-to

FileMaker Pro

Creating a basic FileMaker Pro database that can manage your information is so easy, you might be tempted to stop learning once you know how to define fields (such as name, user, and date) and design layouts. But if you take FileMaker Pro one step further—adding buttons that activate scripts—you can automate your databases and customize them to meet specific needs.

Scripts are powerful tools in any program. In FileMaker Pro they're also a snap to create. Thanks to the program's ScriptMaker feature, you don't have to learn a word of code to create buttons—just select from the commands FileMaker provides. You can script buttons that automatically perform a variety of tasks, such as switching among layouts, finding a set of records, sorting records, checking spelling, and even sending an e-mail message.

To tap into the real power of buttons and scripts, experiment with *nesting* scripts—one-step subscripts combined in a larger master script. Nesting scripts let you trigger a string of tasks with the click of a button. The script in our sample project, for instance, finds all the incomplete items on a to-do list, sorts them by two criteria, and displays them in a list view—all with one simple click. Once you get the idea, there's no limit to what you can do with FileMaker Pro's buttons. **m**

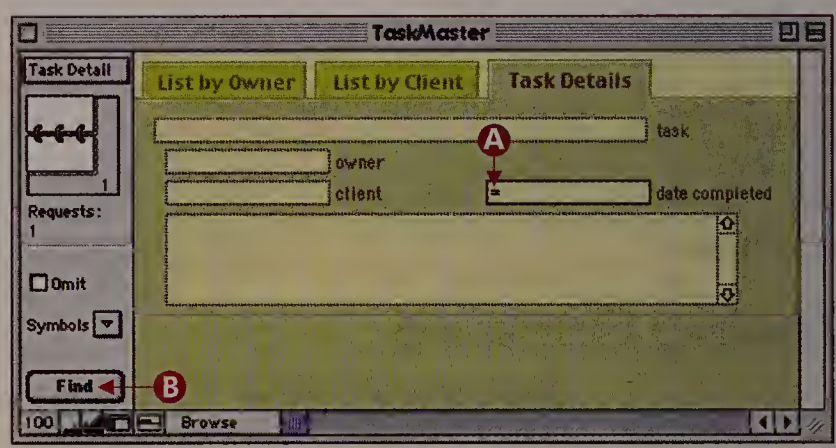
FileMaker Pro consultant SCOTT LOVE is still trying to live down the goofy interface he built for his first professional database more than a decade ago.

1

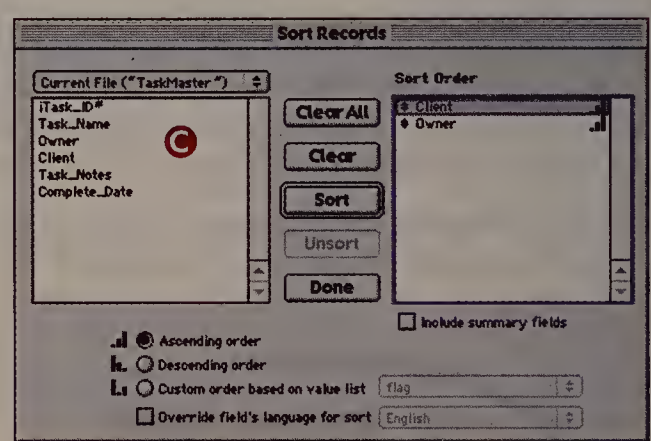
Get Set Up Before you can begin creating this sample script, you have to set the Find and Sort criteria. If you perform a find and sort with the right criteria just before you create the script, FileMaker Pro will apply those criteria to the script.

Begin by creating a database that manages a simple to-do list. You'll need at least two layouts—a list layout (in this example, List By Client) and a standard layout (in this example, Task Details)—and the following fields: Task_Name, Owner, Client, Task_Notes, and Complete_Date.

Next, set the Find function to bring up all records with an uncompleted task—records with an empty Complete_Date field. Go to the Find mode (in version 5, View: Find; in version 4, Mode: Find), enter an equals sign (=) in the Date Completed field **A** *to search for empty fields, and click on the Find button* **B**.



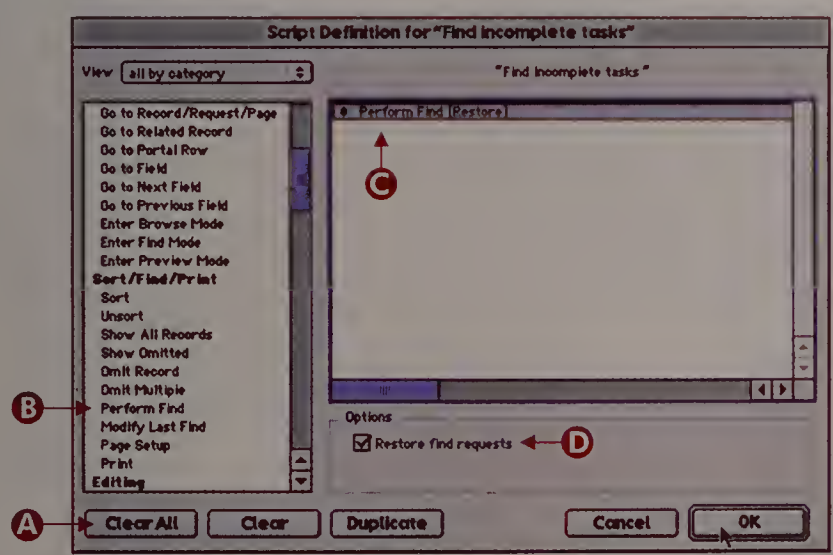
To set up sorting, open the Sort Records dialog box (in version 5, Records: Sort; in version 4, Mode: Sort). Add the fields you want to sort by—in this example, Client followed by Owner—by double-clicking on their names in the list on the left **C**.



2

Create Subscripts Ta create a buttan that lets yau perfarm multiple tasks, yau must assign it a script that contains subscripts. That's where ScriptMaker comes in.

Chaase ScriptMaker from the Script menu, and enter a name (in this example, it's Find Incamplete Tasks) in the Script Name field. Click on Create and, in the resulting window, click on Clear All Ⓐ to remave the default script cammands. Scrall down the list af cammands an the left and dauble-click an Perfarm Find Ⓑ to move it inta yaur script Ⓒ. Leave the Restare Find Requests aptian selected Ⓓ, sa yaur script will use yaur most recent Find criteria—in this case, the equals sign in the Date field. Click an OK, and yau've campleted the first subscript.



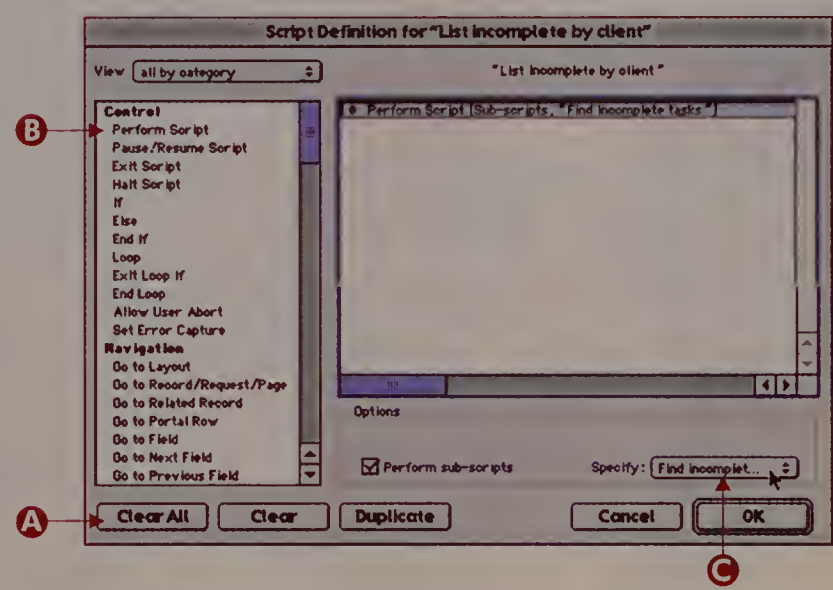
Ta create the secand subscript, begin in the main ScriptMaker windaw. Enter a name for the subscript name, far example, Sart By Client And Owner, and click on Create. Just as yau did before, remove the default cammands and scrall through the list af actians on the left, but this time dauble-click an the Sart command. Leave both the Restore Sart Order and Perform Withaut Dialag aptians selected, and click an OK. Naw yau've gat two subscripts ready ta ga.

TIP: *Yau can reuse subscripts. Far instance, yau can assign a subscript its own buttan ar cambine it with ather subscripts ta create new master scripts.*

3

Create a Master Script Now it's time ta put the subscripts inta the final script using ScriptMaker. Once you've nested them and added an additianal cammand, your script will let yau find incamplete tasks, sart by client and awner, and switch ta yaur list layaut.

In the main ScriptMaker window, give your master script a name (in this example, it's List Incomplete By Client) and click on Create. Clear the default script commands Ⓐ in the Script Definition windaw, and double-click an the Perfarm Script command Ⓑ. Leave Perfarm Subscripts checked, select Find Incomplete Tasks from the Specify pap-up menu Ⓒ, and click on OK ta finish nesting yaur first subscript. To nest the secand subscript, double-click an the Perfarm Script cammand again, but this time select Sort By Client And Owner fram the pap-up menu.



Next, dauble-click on the Ga To Layout command. Select the name af yaur list view (here it's List Incamplete By Client) fram the pap-up menu. Leave the Refresh Windaw option unselected. (It's necessary anly in certain circumstances—far instance, when yau've updated calculatians ar relationships—and it slaws things dawn.) Naw click an OK. Your scripting is finished, sa click an Dane in the main ScriptMaker windaw.

cantinues

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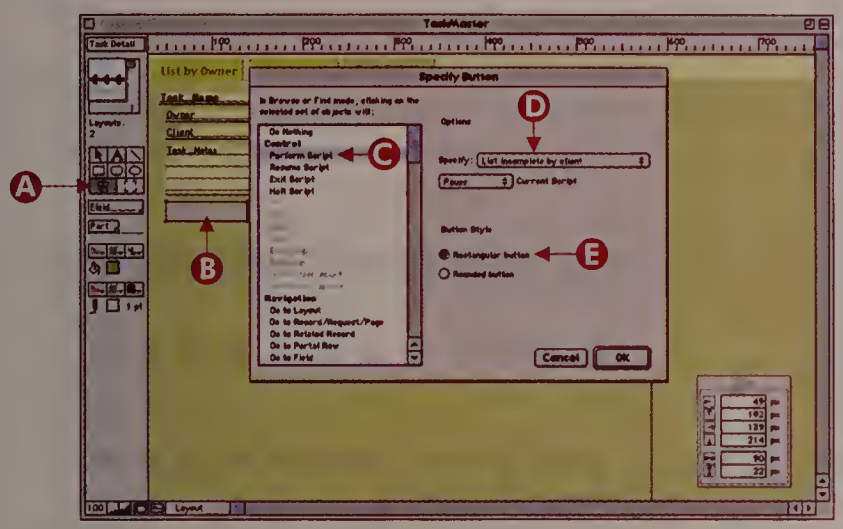
4

Build a Button Now it's time for our button to make its appearance. Attaching scripts to buttons is simple—just remember to attach a script to the button you create before placing it on layouts in your database. This will save you some grunt work.



Go to Layout mode and click on the Button tool A. Click and drag the cursor across your layout until you get the button dimensions you want B. In the resulting dialog box, select the Perform Script command C and then choose List Incomplete By Client from the Specify pop-up menu D. Leave the Pause option selected (it won't affect this function), and choose the button style you prefer E. (To pick a button type in version 4, you must go to Edit: Preferences: Application: Layout.) Click on OK, and then complete the last step: type a label for your button in the layout.

More Info: www.macworld.com/2001/02/howto/filemaker.html

To learn how to create the tabbed interface in these figures, check out this article at Macworld.com. You'll also find a list of FileMaker tips that can spare you lots of hassle.

LINK

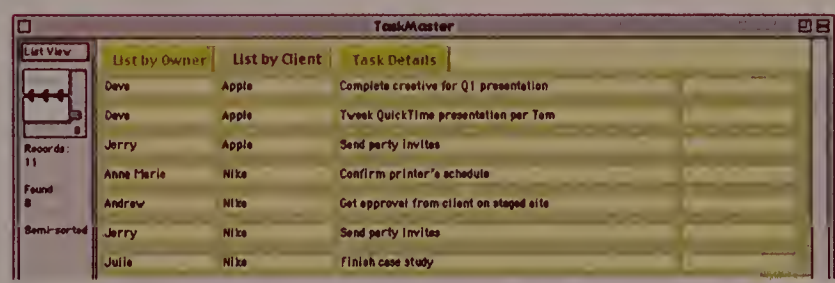
5

Add a Finishing Touch If you're not satisfied with FileMaker's generic buttons, here's one last user-interface tool for your repertoire: buttons with custom graphics. This step is optional, but it's simple, and you can use the same technique to spruce up any layout.

In version 5, select Picture from the Insert menu. In the Picture dialog box, select the image you want; it will appear on your layout when you click on OK. In version 4, choose Layout mode, and open the Import Picture dialog box (File: Import/Export: Import Picture) to find the image you want for your button and put it in your layout.

Use the guide corners of the image to resize it if you wish. Then, under the Format menu, select Button. Finally, assign a function to the custom button, just as you would for a regular button.

Keep in mind that if you share this database across a network, custom images will cause your layouts to load more slowly. Be sure to test your database before going nuts with custom icons.



Here is the final result of performing the script.

How-to

FileMaker Pro

TERRI STONE AND AMY CONGER

Free Your Fonts in QuarkXPress

Personalizing Type Is Easier Than You Think

More typefaces are available today than ever before. But sometimes you want your words to look like no one else's. When a headline or logo has to make a unique statement, but you don't have the budget to commission a font, you can customize existing type.

Type customization has long been possible in vector-drawing programs such as Adobe Illustrator and Macromedia FreeHand, though with these programs, you have to export the results as an EPS file for placement in a page-layout program. But you can tweak type directly in QuarkXPress 4.1 (800/676-4575, www.quark.com)—all you need is the Text To Box command and a willingness to experiment.

You can easily add borders; change a letter's color, position, or shape; and fill letters or entire words with images or text. These techniques don't work on styled text, so if you want all caps, for example, you'll have to create them manually by holding down the shift key as you type instead of relying on font styling.

Before you try any of these tips, begin by typing the word or words you want to modify in a text box. Select up to one line of text with the Content tool, and then go to the Style menu and select Text To Box. A duplicate of your selected text, made up of Bézier lines and without color, will appear below the original. Click on it, and you can start customizing your text. m

TERRI STONE is the senior editor of *Macworld's How-to* section.

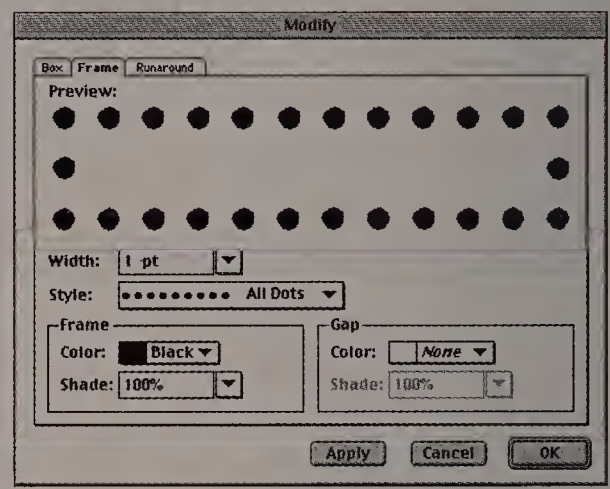
AMY CONGER is a *Macworld* design associate.

1

Outline and Color All Letters Once you've converted your type, you can outline and color it as you would any QuarkXPress box. You can easily control the weight and style of the outlining stroke you use.

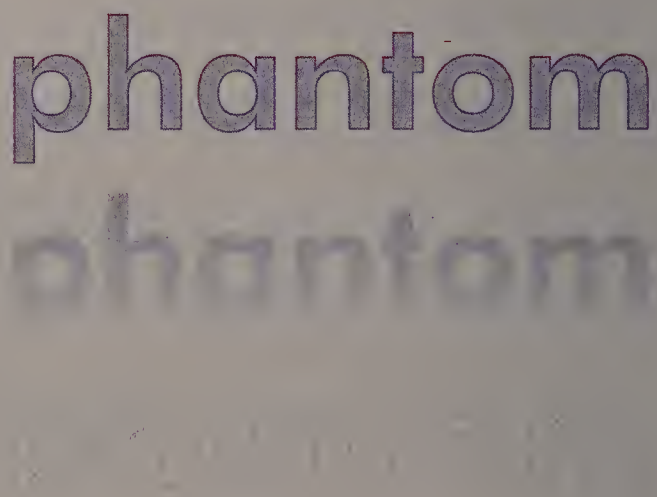
With the duplicate text selected, go to the Item menu and select Modify (or press ⌘-M). In the resulting dialog box, choose an appropriate box color and shade. Click on the Frame tab, and pick a line width, style, color, and shade A.

A

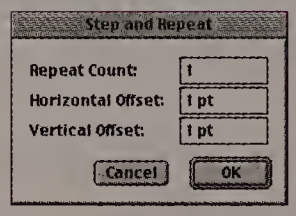


By playing with these variables, as well as with the Blend feature available in the Colors palette, you can create many different effects B.

B

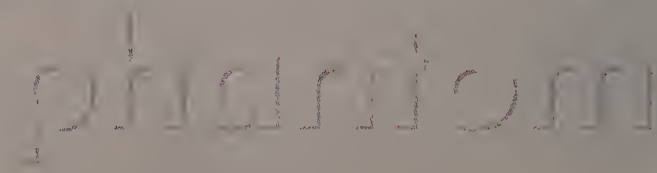


C



You can easily create a shadow effect by duplicating a word (⌘-option-D). In the resulting dialog box, give it only a small offset C, *and then change its color* D.

D



2

Style Letters To further customize your type, you can change the color and position of individual letters in subtle or dramatic ways.

To separate letters so you can treat them differently, go to the Item menu and select Split: Outside Paths. Now you have many ways to manipulate the type.

For example, you can create a rainbow effect by giving each letter a different color Ⓐ*. Just select the letter and click on the appropriate shade in the Colors palette.*

Ⓐ rainbow

Or select part of a letter, such as the dot of an i, and give it another color Ⓑ*.*

Ⓑ simple

You can also rotate individual letters or parts of letters Ⓒ *without affecting the rest of a word, by selecting the letter or its component and entering any value from 0 to 360 degrees in the Measurements palette.*

Ⓒ tumbling

Once you've finished altering individual letters, select all the letters and choose Group from the Item menu so you won't accidentally lose the look you labored to achieve.

3

Break Apart All Paths Breaking apart all paths in a letter may not make much sense—until you see what you can do with ornamental typefaces. The results resemble fine art more than they do fonts.

Find a dingbat or ornament you like in a picture font such as Zapf Dingbats. (This example uses the c and p in Pre-Columbian Ornaments One Ⓐ*, a shareware font available on several Web sites.) Apply the Text To Box command.*

Ⓐ

Select the box with the Item tool, and then go to Item: Split: All Paths.

Apply a fill color, and you'll see all counters (the white spaces inside letters) fill in Ⓑ*. Because you have many individual paths, not a compound path, each letter has the same fill color.*

Ⓑ

Now the fun starts. Using either the Item or Content tool, click on any path in the letter and style it as you did in the first tip. This is a great way to achieve a colorful effect Ⓒ*. To make a piece "knock out," color it white.*

Ⓒ

Once you're satisfied with a character's appearance, lock it by selecting all paths and choosing Group from the Item menu.

To make the separate paths behave as a compound path again, select them and go to Item: Merge: Combine.

continues

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4

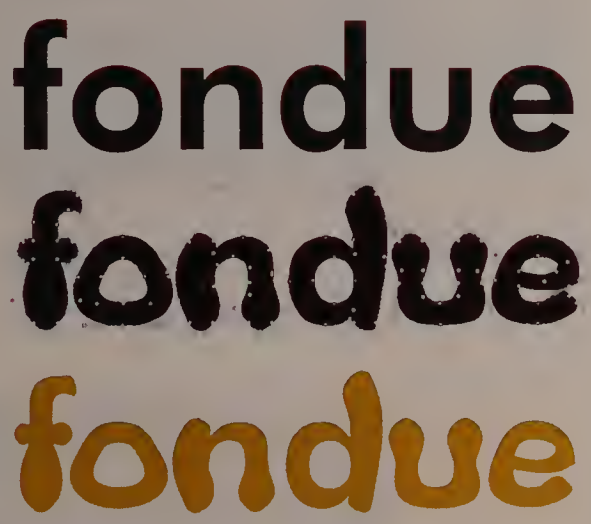
Reshape Letters You may need to go beyond the original letterforms to make your type stand out. Reshaping letters will give yours a look no one else has.

Choose the box, go to the Item menu, and make sure the Shape option in the Edit submenu is selected.

Now click and drag on any point or segment in any letter to push and pull the existing Bézier curves as far as you dare.

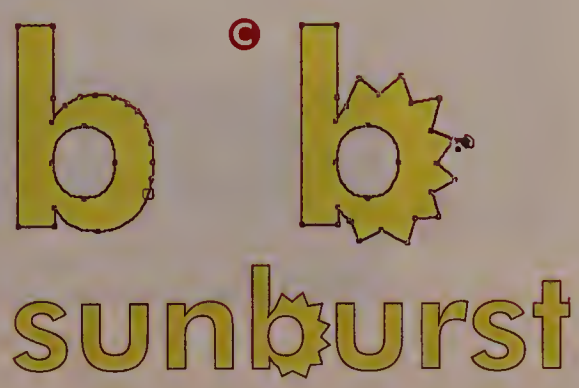
You can also convert points and line segments from curved, or smooth, points to straight, or corner, points and vice versa **A**. *To do so, click on a point or segment and go to Item: Point/Segment Type.*

A



If you can't get the effect you want using the existing points, you can add or delete points. Add points by option-clicking on a line segment **B**. *Delete points by option-clicking on existing points. Then push, pull, and convert those points until you get the shape you want* **C**.

B **C**

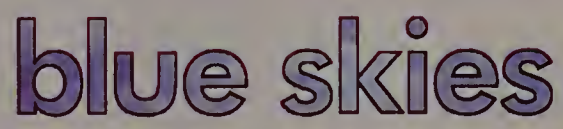


5

Fill with Picture or Text A picture is worth a thousand words, especially when a picture *is* a word. You can fill any combination of letters with an image or with text.

The Text To Box command automatically creates a picture box, so it's easy to fill an entire headline with an image. Go to File: Get Picture, or press ⌘-E **A**.

A



To fill individual letters with different images, go to Item: Split: Outside Paths, and then select a letter. Press ⌘-E to place the picture you want inside the highlighted letter **B**.

B

To convert your letter or word to a text box, select it, go to Item: Content, and then select Text. Now you can import text (File: Get Text, or ⌘-E) or type directly in the letter or word **C**. *It may take some experimentation to get an effect that looks good and reads well. Try changing the text inset and column settings until the text flows in a readable manner.*

C

JEFF CARLSON

Quick and Easy Web-Site Plans

Construct a Site's Architecture with Adobe GoLive

When you're designing a Web site, your most powerful tool is not a speedy Power Mac or unlimited bandwidth. It's the humble site map, the foundation of a site's structure and the blueprint for a site's growth (and they *all* grow).

The problem with the conventional site map, which often begins on a piece of paper, is that it's likely to change drastically during the course of a Web project, reducing most paper-based maps to a mess of scribbles and revisions. Even when you translate the site map into an electronic format, such as a Macromedia FreeHand or an Adobe Illustrator file, you can still spend hours updating the site map if you modify the site structure.

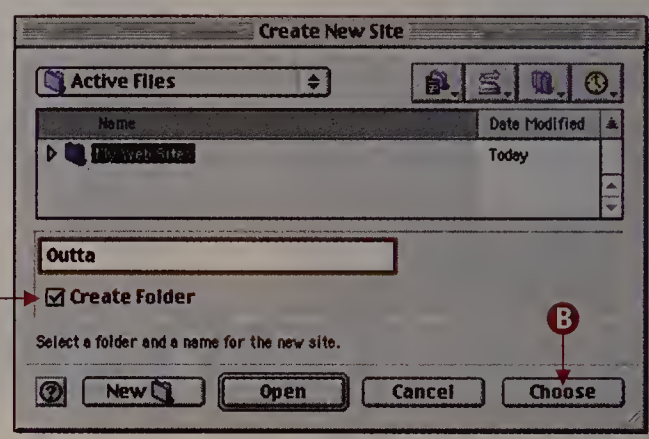
Until now, there have been few digital tools for building site maps, especially on the Mac. Adobe GoLive 5 (800/833-6687, www.adobe.com) features a new Design tool that lets you not only quickly create and edit a site map, but also build several alternate structures (which GoLive terms *designs*) for the same site so you can try out different ideas. Once it's built, you can use the map as the shell structure for building the site. **m**

JEFF CARLSON is a coauthor of *Real World Adobe GoLive 5* (Peachpit Press, 2000) and the managing editor of the online newsletter TidBits.

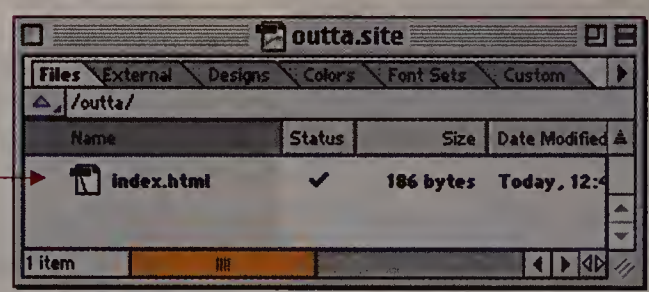
1

Create a Site File and a Design The backbone of GoLive's site-management capabilities is the site file, which stores a wide variety of information. You can view the site file under the Designs tab in the Site window.

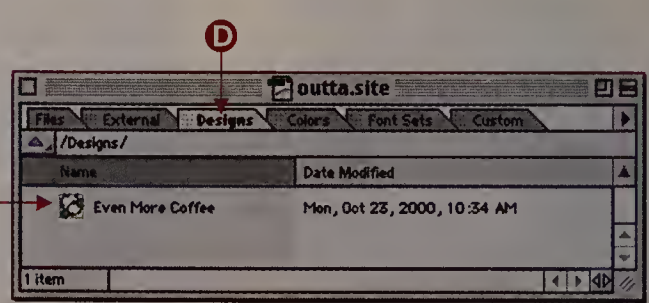
Create a new site file by selecting Blank (⌘-option-N) from the New Site submenu of the File menu and giving it a name. Mine is called "outta.site." (GoLive automatically appends .site to any name you enter.) Select the Create Folder option Ⓐ to store all associated files together in a similarly named folder. Finally, click on the Choose button Ⓑ.



Now GoLive automatically creates a home-page file called index.html Ⓒ.



Go to the Designs tab Ⓓ of the Site window that appears, select New Site Design from the Design menu, and then give your design a name. I've named mine Even More Coffee.

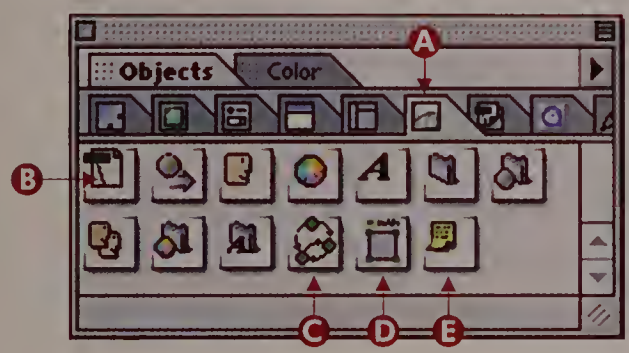


To start building your site map, double-click on the design icon Ⓔ to open the design-editing window.

2

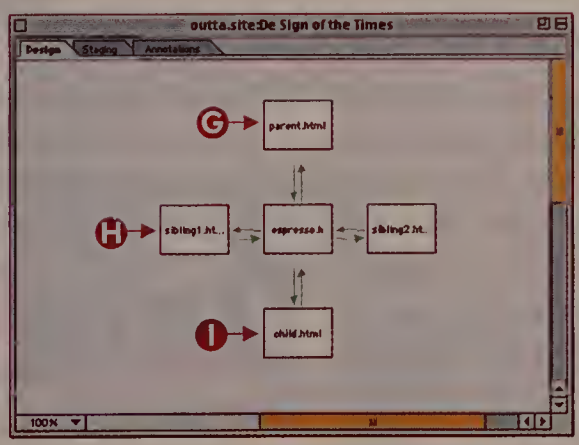
Build a Family of Pages To build the map, first anchor the design to the index.html page, and then populate the design with other pages by dragging and dropping icons from the Objects palette.

Switch back to the Files tab of the Site window and drag the index.html file to the design-editing window. Then, in the Objects palette (⌘-2), switch to the Site tab Ⓐ and find the icons for four tools used with site designs: Generic Page Ⓑ, Design Section Ⓒ, Design Group Ⓓ, and Design Annotation Ⓔ.



To start building your family of pages, drag a new Generic Page icon or a Design Section icon onto the index.html anchor so that a dark bar appears next to the existing page.

Dropping the icon onto the top creates a parent Ⓖ, which is one level higher; dropping it onto the left or right edge creates a sibling Ⓗ, which is at the same level in the site hierarchy; and dropping it onto the bottom creates a child Ⓘ, which is one level lower. Green arrows indicate navigation pathways.



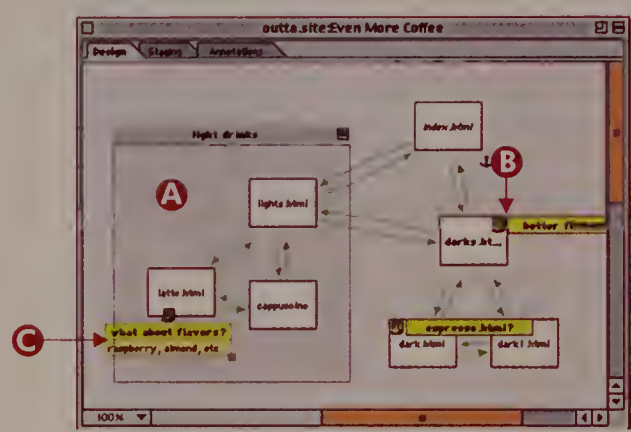
Drop a Design Section icon to create one or more site-map pages that will eventually end up in their own subfolder of the hierarchy; they can also share a common page template.

3

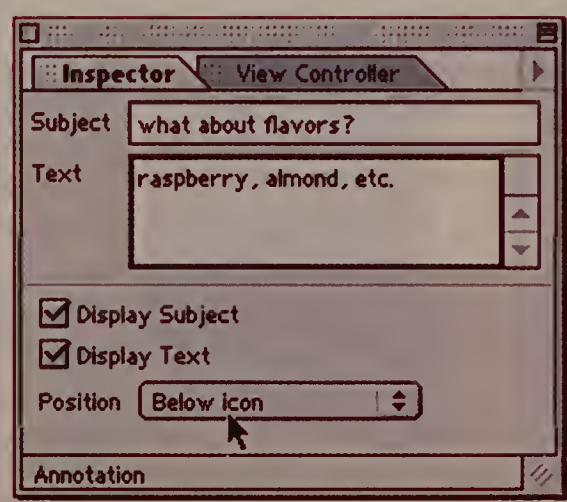
Making Sense of the Map In addition to the Generic Page and Design Section features, site designs employ two methods of making sense of it all: Design Group and Design Annotation.

The Design Group icon in the Objects palette represents a container; pages within it remain grouped together on screen. Although grouping items doesn't affect their placement in the hierarchy, it helps you keep track of related items, such as pages whose contents share the same theme Ⓐ. Design Groups exist purely for your organizational benefit.

Design Annotations let you attach comments or queries to items in the design, in the same way you slap Post-it notes onto a paper-based site map. Drag the Design Annotation icon onto a page Ⓑ, group Ⓒ, or link to add a note.



Use the Annotation Inspector to control what the notes display.



continues

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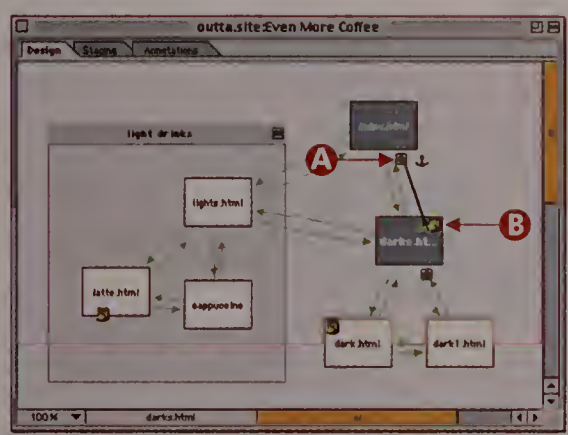
4

Create Pending Links Viewing the structure of your site only goes so far: you still have to provide working hyperlinks so visitors can move among the pages. After you set up the links, you can easily add them to the pages' contents.

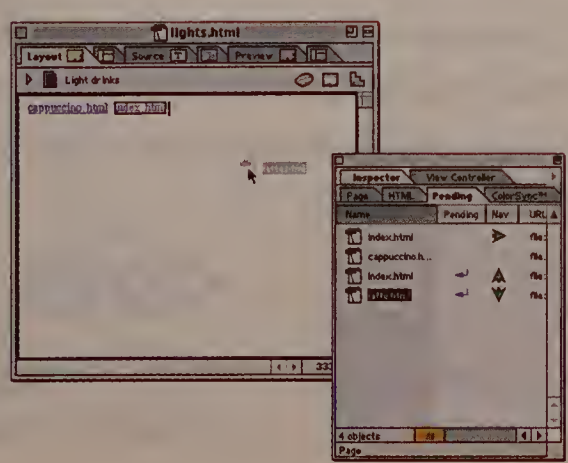
Click on a page icon to reveal the Point And Shoot tool at the lower right edge of the page icon Ⓐ. To create a link from one page to another, click and drag the Point And Shoot tool until the destination page is highlighted Ⓑ, and then release.



Blue arrows appear when you've successfully added a hyperlink.

You can click on a link and drag its center point to change the angle of the line (which often makes it easier to spot), or choose a setting from the Deflection pop-up menu in the Link Inspector.

Later, when you're building the pages' contents, you can view pending links by bringing up the Page Inspector within the Layout Editor and clicking on the Pending tab. At that point, drag links from the Pending tab Ⓒ to your layout Ⓓ to insert the link.



5

Submit the Design Your structure is built and your links are pending, but the design is still just a collection of empty placeholder pages. Now you need to make the pages active so you can flesh out their contents. To activate the site, first check the design, and then submit it.

Click on the Check Design button on the Toolbar to look for potential problems that would prevent GoLive from staging the design, that is, moving the placeholder files into your site's main directory. The errors generally address misnamed files or unspecified links. GoLive reports problems under the Staging tab Ⓐ of the design window.

Once the design checks out, it's time to make it active. Click on the Submit Design button in the Toolbar, or select Submit Design from the Design Staging submenu under the Design menu. GoLive moves the pages to the Live Files folder in the design window. (They also appear in the Files tab of the Site window.)

After you've built your placeholder files and the site's structure, you can move forward to the easy part: designing the appearance and content of your site.

More Info: www.macworld.com/2001/02/howto/checkdesign.html

Find out more about the five types of Check Design errors, and learn how to fix them.

LINK

Some content is hard to update.

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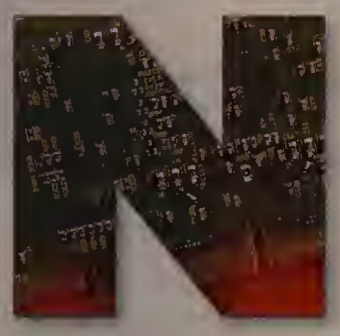
Christopher Breen

Mac 911



Now that the election-year hoo-ha is over, the holidays are behind us, and Apple has taken significant steps toward releasing OS X, we are free to ponder what *really* matters: How does one transfer an address book from Netscape to Eudora? What causes a CD-R burner to fail? And why won't Sherlock plug-ins install when you drag them onto a closed System Folder?

Change of Address Book

Marian MacLeod, who, judging by the suffix in her e-mail address, lives in a climate favorable to walruses and caribou, writes that she'd like to employ Eudora as her e-mail client but has a problem. She can't find a way to import the address book from her current e-mail program, Netscape Communicator, as Eudora 5's Import Mail command won't import Netscape addresses.

The situation isn't hopeless. I could recommend that Marian take advantage of a Web-based application such as ABConverter (www.jhanda.com/ABConverter), which costs about $10 per use, to do the job. But I prefer a free (and more devious) method, a little something I call the Outlook Express Runaround. The idea behind the Runaround is to use Microsoft Outlook Express 5 as a conduit for moving your Netscape addresses to Eudora. Here's how it works:

Download and install a copy of Microsoft Outlook Express 5 (www.microsoft.com/mac/download). Now launch Outlook Express and select Import from the File menu. In the resulting window select the Import From An Application option, and in the succeeding window select Netscape Communicator 4.0 Or Higher. Go to the next window and deselect every option except Addresses. (If you want to import e-mail messages as well, leave Mail Messages selected.) Click on the tiny right-pointing arrow at the bottom of this window, and your Netscape addresses will waltz their way into Outlook Express. Then you just click on Finish and quit the program.

Fire up a copy of Eudora 5 and select the Import Mail command. In the window that appears, select Outlook Express 5 from the pop-up menu and click on OK. Select Main Identity, and then click on the Import Account button in the next window. Finally, in the Import Mail window, select only the Address Book Information option and click on OK. In less than a long wink, the Netscape addresses you imported into Outlook Express will be shoveled into Eudora's Address Book.

A Burning Issue

A visitor to the Mac 911 Forum (www.macworld.com/subject/mac911), Gerard Walschap, is distressed that his LaCie SCSI CD-RW drive—rated to write at 12x—seems able to successfully burn CD-Rs at only a measly 1x. When he attempts to burn at faster rates, Toast 4.1 sends up an ominous "buffer underrun" error, and his CD-R disc becomes a useless hunk of shiny plastic.

Naturally, my heart goes out to Mr. Walschap, but the depth of this sympathy doesn't diminish my suspicion that he may not have done all he could to prepare his Mac for a successful burn.

continues

To increase the odds of walking away with a newly burned CD, he should:

• Copy the CD-ROM to his hard drive and then to the burner, for the simple reason that a hard drive can deliver data far more quickly than today's fastest CD-ROM drive.

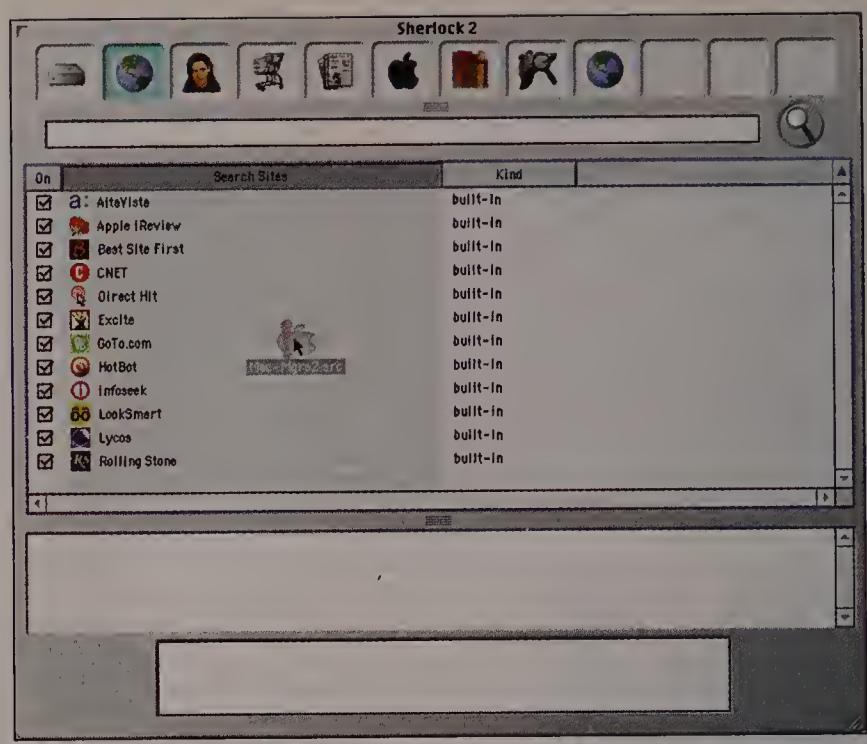
• Nix background applications and networking services—file sharing or automatic e-mail retrieval, for example—during the burn. Such background activities can easily interrupt the delivery of data to a CD burner, drain the burner's buffer, and result in underrun errors.

• Allot a large enough RAM buffer in Toast to prevent these errors. For pity's sake, Walschap, Toast allows you to buffer data to the Mac's RAM for additional short-term storage, so why not take advantage of it!?

In summary, keep it simple. Using Apple's Extensions Manager or Casady & Greene's Conflict Catcher, create a base set of only those extensions and control panels necessary to perform the burn; the CD-R–burning software should be the only active application during a burn. Burn files from a hard drive rather than from a CD, and use Toast's RAM buffering feature to full advantage.

A Puzzle for Sherlock

James Schneider, another visitor to the Mac 911 Forum, couldn't successfully install Sherlock plug-ins—you know, those files that allow Sherlock to explore particular Web sites—even though he followed Apple's advice to drag and drop these plug-ins onto a closed System Folder. Although the plug-ins were filed in the Internet Search Sites folder within the System Folder, they never appeared in Sherlock 2's list of Internet sites.



Such a Drag To install a new Internet Search Site in Sherlock 2, first open Sherlock and then drag and drop the site into its main window.

Unfortunately, the freshness date on the advice that James received has long since passed. With the original Sherlock (the version that shipped with Mac OS 8.5 and 8.6), dragging and dropping Sherlock plug-ins to a closed System Folder did cause new search sites to appear within Sherlock. But with Sherlock 2 and OS 9, this is no longer the case.

To successfully add Sherlock plug-ins, you must do one of two things: open the Internet Search Sites folder and drag the plug-ins to the Internet folder that lurks within, or drag the plug-in directly into the open Internet pane of the Sherlock window (see "Such a Drag").

Because I tend to add new search sites on a regular basis, I've created a separate channel for new sites. You can, too, by choosing New Channel from Sherlock's Channel menu, giving your new channel a descriptive name such as My Channel, assigning an icon to the channel, selecting Searching from the Channel Type pop-up menu, and placing additional search sites in this channel via the methods I described here. **m**

Contributing Editor CHRISTOPHER BREEN is a coauthor of the recently revised and updated *My iMac* (IDG Books Worldwide, 2001).

Tip of the Month

I love my new Power Mac G4 Dual Processor, but the Apple Pro Keyboard that came with it lacks the Power key that allowed me to shut down my Mac with the push of a button. To rectify the situation, I wrote the following AppleScript:

```
tell application "Finder"
  activate
  shut down
end tell
```

I saved the script as a Classic Applet and, through the Keyboard control panel's Function Keys window, assigned it to one of the function keys. Now when I want to shut down, I simply press F15.

David H. Cohen
New York, New York

Share tips and discuss Mac problems with other Mac users in the Mac 911 Forum (www.macworld.com/subject/mac911). Also send tips by e-mail to mac911@macworld.com. We pay $50 for tips selected for publication in *Macworld*. All published submissions become the sole property of *Macworld*.

Shareware and freeware mentioned in *Mac 911* are available from the Macworld Online software library (www.macdownload.com).

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ViaVoice Enhanced Edition

Speech Software Is Bigger, Not Much Better

VIAVOICE ENHANCED EDITION

Rating: 1/2

Pros: Improved accuracy; works well in SpeakPad text editor.

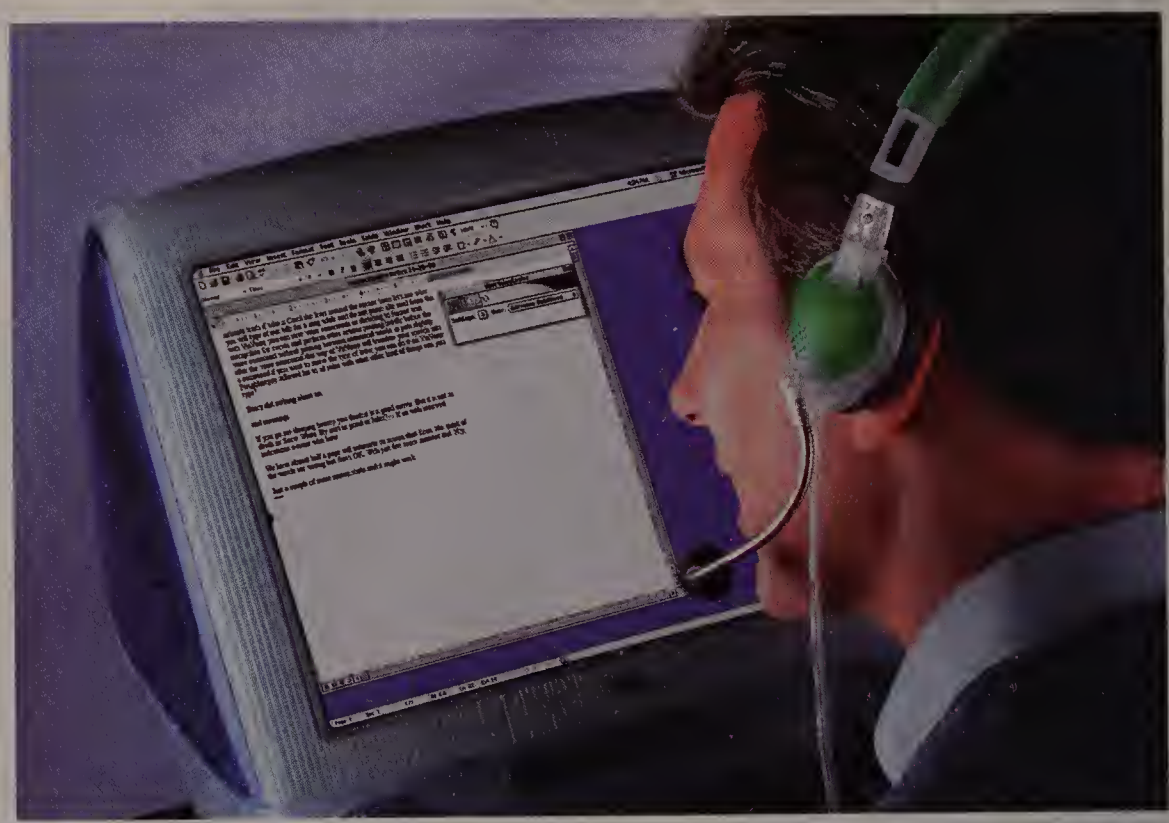
Cons: Buggy; quirky; unusably slow in Word; lousy manual.

List price: $141

Company: IBM, *800/825-5263*, **www.ibm.com**

MACWORLD'S BUYING ADVICE:

ViaVoice Enhanced Edition offers a reasonably polished dictation experience if you stick with SpeakPad. But when it comes to allowing you to dictate into other Mac programs, the Enhanced Edition needs further enhancement; it can be slow, unpredictable, and crash-prone. Still, it's a relatively easy way to plow through e-mail messages, and it performs tolerably in AppleWorks. The program is a tantalizing promise of what may lie ahead in a more mature, better documented, much faster edition.



JOHN GREENLEIGH

ViaVoice Millennium Edition, released nearly a year ago, was a big event for the Mac crowd, who had never before enjoyed real-time dictation software ("Listen Up," June 2000). The program was obviously a first stab—it was quirky, and it limited you to brain-dumping into a SimpleText-like text editor called SpeakPad. But it was irresistibly inexpensive, and IBM pledged to continue working on it.

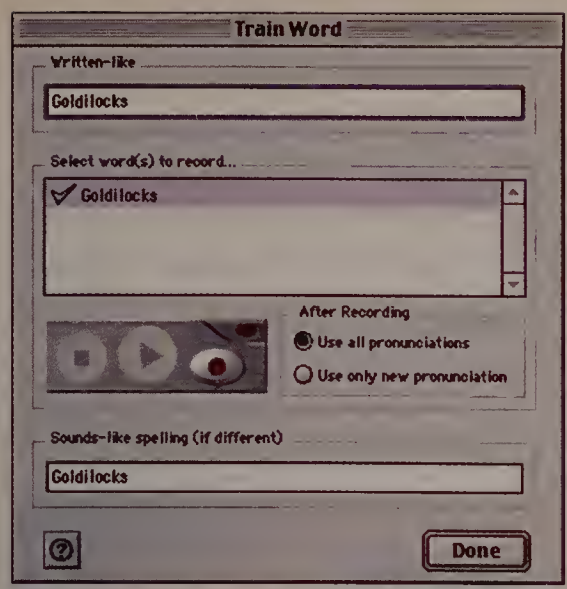
The more expensive second version, ViaVoice Enhanced Edition (VVEE), isn't limited to the SpeakPad application: you can use it to dictate into Microsoft Word 98, Internet Explorer 4.5, and Outlook Express 4.5 and AppleWorks 6. Never mind that most of those are outdated software versions; being able to speak directly into those programs would be a thrilling stunt. But VVEE is hampered by some serious limitations.

Long-Winded Beginnings

As before, the program comes with an elegant, comfortable headset microphone, now equipped with a USB connector instead of a miniplug.

The manual (which is skimpy and riddled with typos) directs you to begin your VVEE experience by reading into the headset mike as many canned book excerpts as you can stand. The more you read, the better the software gets to know your voice and the better its accuracy.

Now you're ready to attempt dictation in the SpeakPad application. This is likely to be the highlight of your VVEE experience; using SpeakPad, you enjoy noticeable improvements in speed and accuracy over the original ViaVoice.



Text Macros ViaVoice lets you create new pronunciotions for existing words, ond you con teach it entirely new words. It can olso hondle *text macros*—long stretches of text that oppear when you soy o much shorter phrose.

SpeakPad transcribes your words almost as quickly as you can say them, and it offers smoothly integrated vocal formatting and error correction. If you say "operation," but the program hears "aberration," you say, "Correct *aberration.*" The program highlights the erroneous word and displays a list of its closest guesses (in can't-miss, 24-point type); if you see the word you intended, you can select it from this suggestion list by saying its number ("pick 3," for example). SpeakPad instantly corrects the error and learns not to make it again.

When you've finished dictating, you can speak commands such as "Transfer to Word" or "Transfer to Eudora"; SpeakPad copies what you've dictated, switches to the program you named, and pastes in your words—just as it did in the original version. This copy-and-switch process is surprisingly fast, and it's not as clunky as it sounds.

Dedicated Dictation

The most delicious promise of the Enhanced Edition, however, is that you can dictate directly into your programs, thanks to a new background application called Direct Dictation.

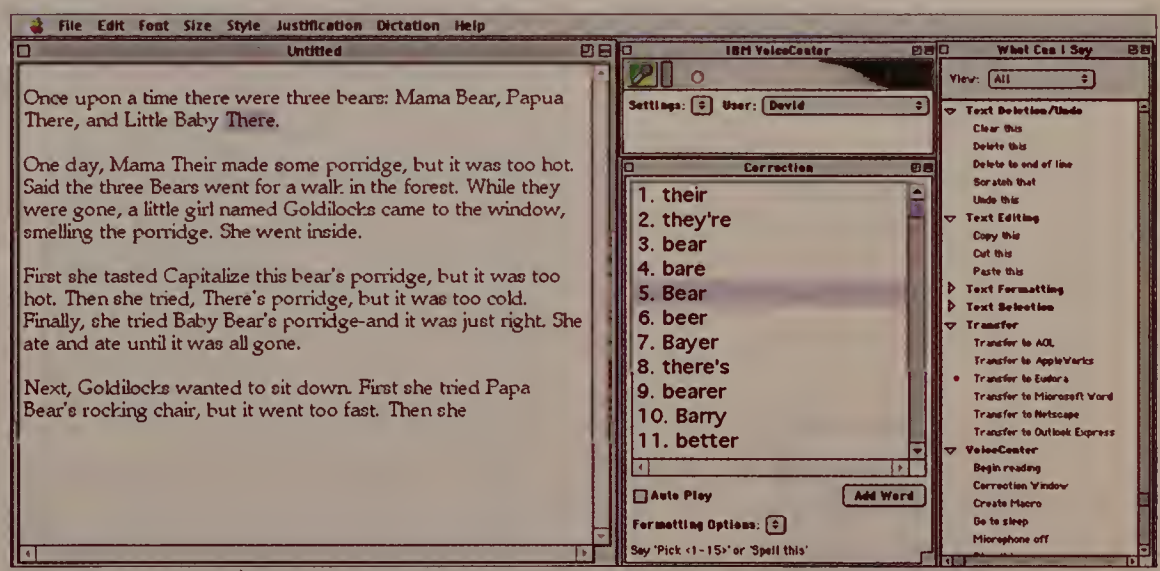
Unfortunately, the Direct Dictation feature is much more limited than SpeakPad. In Outlook Express, for example, you can't correct errors by voice; you can dictate only a rough draft, and then you make corrections using the keyboard and mouse. In AppleWorks 6 or Word 98, you can correct mistakes by voice, although it's slow going in AppleWorks, and VVEE's Read Me document warns you to keep your documents under a few pages. Also, when I attempted to make spoken corrections in Word, ViaVoice often highlighted the wrong word. Another limitation with Word is that you're restricted to opening one document at a time. In Internet Explorer you can jump to sites by voice, but it's far faster to choose from the Favorites menu.

Direct Dictation is also more unstable and unpredictable than SpeakPad: it makes more transcription errors, such as putting extra letters into the text when you're dictating into Microsoft Word, and even omitting words entirely. In Outlook Express, it sometimes leaves insertion-point cosmetic glitches on the screen. In all programs, it often leaves the insertion point in the wrong place, and if you correct the last word in a sentence, it adds a space before the period. It causes Word 2001 to crash on startup (by putting an alias in Word 2001's startup folder), and it can lock up your machine if you switch applications before it's finished processing your words.

The most crushing disappointment is Direct Dictation's glacial pace in Word 98. The sluggishness varies, but ViaVoice can easily take more than a minute to process a 20-word paragraph on a 450MHz Power Mac G4. In short, the program is nearly unusable in Word. You'll get much more work done by dictating into SpeakPad and using the "Transfer to Microsoft Word" voice command after each paragraph.

A Speedy Rival?

Erik Sea, ViaVoice for Mac's lead programmer, told readers of the Mac Voice mailing list that the next version is already in the works—a Mac OS X edition that will "knock our socks off." Until then, you might want to look to MacSpeech, which finally released its long-delayed iListen, 1.0.1 ($100; www.macspeech.com) in November. iListen also promises direct dictation into Word and many other programs, and the preview version delivers with speed that makes ViaVoice look positively poky.—DAVID POGUE



Take One My first poss at dictoting o foiry tale looked like this. At right: the Correction window, showing o wrong word in the process of being fixed.

Internal ATA Hard Drives

Easy-to-Install Drives Provide Large Capacities and Good Performance

MACWORLD'S BUYING ADVICE:

We preferred the Seagate Barracuda ATA III, which offers a large capacity and fast speed for a very affordable price. Cost-conscious consumers should also consider a drive that uses an ATA66 bus, such as the Quantum Fireball Plus LM.

Seagate's Barracuda ATA III (left) and U Series 5

ARNOLD TIOSEJO

You can easily to fill up 10GB with MP3 files, digital images, and multimedia projects. So if you haven't yet upgraded your hard drive, now might be the time. These days, you can get a whole lot of drive for your dollar, as large-capacity drives—40GB to 80GB—cost less than $350.

For this roundup, Macworld Lab tested seven internal ATA hard drives with capacities greater than 30GB: APS/IBM's Deskstar 75GXP (45GB), Maxtor's DiamondMax 80 (80GB) and DiamondMax Plus 45 (45GB), Quantum's Fireball Plus LM (30.4GB), Seagate's Barracuda ATA III (40GB) and U Series 5 (40GB), and Western Digital's Caviar WD400BB (40GB). Each has an ATA bus rated at 100 MBps (or *ATA100*), except for the Fireball Plus, with a rating 66 MBps (or *ATA66*).

Installing any of these drives is very straightforward. If you have a G4, just pop open the door, attach the drive with a mounting bracket, plug in a cable, and initialize the drive, and then you're ready to go (see "Starving for Storage?" *How-to*, January 2001).

The Bus Factor

We measured the amount of time it took to copy a 100MB file and to copy a folder that contained 100MB in small files. We also timed how long it took to optimize a disk using Speed Disk from Norton Utilities 5.0.3, a test that measures a drive's ability to seek data.

Our test system, a Power Mac G4/500, uses an ATA bus rated at 66 MBps—a speed bottleneck that can restrict the overall speed of ATA100 drives. As the results show, the per-

Macworld LAB TEST

formance of the Quantum Fireball Plus LM, with its 66-MBps bus, was comparable to that of its 100-MBps counterparts in our tests. Its speed, combined with its price (it's the least-expensive drive in our roundup) make the Fireball an ideal upgrade for budget-conscious users who need the extra disk space.

So are ATA100 drives a waste of money? No. You can bet that Mac hardware in the not-so-distant future will have an ATA100 bus, and if you sell your old Mac, you'll be able to keep the ATA100 drive and use it in your new machine.

The fastest drive in our tests was the Seagate Barracuda ATA III, a 40GB drive rated at 7,200 rotations per minute (rpm). It was considerably faster than the other 40GB, 7,200-rpm drive, the Western Digital Caviar WD400BB. Seagate's other 40GB drive, the U Series 5, has a slower rotation speed of 5,400 rpm, which explains its slow performance (compared with the other two 40GB drives) in the disk-optimization test.

The drive with the largest capacity in our roundup, the Maxtor DiamondMax 80, posted some of the slower results, due to its 5,400-rpm rotation speed. But with its relatively low price, the DiamondMax 80 is an excellent deal if you really need the space.

Since these are internal hard drives, you don't get much in terms of bundled extras. In fact, with all but the APS/IBM Deskstar 75GXP, you don't get anything at all. The Deskstar comes with APS's formatting software and utilities, but these tools don't offer a significant advantage over the Mac OS utilities.

We also ran our benchmarks on an external VST 20GB Full Height drive connected to the Mac via FireWire. Because the VST drive has a data-transfer rate of 15 MBps, and the FireWire bus has a maximum throughput of 50 MBps, we expected the ATA drives to be much faster—and they were, except for the Maxtor drives, which lagged a bit behind the VST drive.

If you're looking to supplement your current hard drive, you might want to add an ATA drive as a secondary drive on the internal ATA bus instead of adding an external FireWire drive. You'll get faster speeds, and you'll save some cash—external 40GB FireWire drives cost around $650, about $300 more than the most expensive drive in our roundup.—ROMAN LOYOLA

Drive Safely

Macworld LAB TEST

Reference systems in italics. **Best results in bold.** ▬ Shorter is better.

	Duplicate 100MB File	Duplicate 100MB Folder	Optimize Disk
APS/IBM Deskstar 75GXP (45GB)	11	**13**	70
Maxtar DiamandMax 80 (80GB)	14	21	81
Maxtar DiamandMax Plus 45 (45GB)	15	25	107
Quantum Fireball Plus LM (30.4GB)	12	17	73
Seagate Barracuda ATA III (40GB)	**10**	14	**62**
Seagate U Series 5 (40GB)	12	17	74
Western Digital Caviar WD400BB (40GB)	11	17	69
G4/500 27GB internal drive	*11*	*16*	*70*
VST 20GB Full Height (external FireWire drive)	*14*	*18*	*91*
	◀ Better	◀ Better	◀ Better

All results are in seconds. We tested each hard drive in a Power Macintosh G4/500 with Mac OS 9.0.4, 128MB of RAM, a default system disk cache of 4MB, and virtual memory disabled. The baseline internal drive that shipped with the G4/500 was a 27GB Quantum Fireball Plus LM. For the disk-optimization test, we used Speed Disk from Norton Utilities 5.0.3's Speed Disk test with the Verify Media option disabled.—Macworld Lab testing supervised by James Galbraith

Internal ATA Hard Drives Compared

COMPANY	PRODUCT	MOUSE RATING	COMPANY'S ESTIMATED PRICE	CAPACITY	ROTATION SPEED	ATA BUS	CONTACT	PROS	CONS
APS/IBM	Deskstar 75GXP	♦♦♦	$350	46.1GB	7,200 rpm	100 MBps	503/844-4600, www.apstech.com	Good write speed; easy to install.	Expensive.
Maxtar	DiamandMax 80	♦♦♦	$300	80.0GB	5,400 rpm	100 MBps	408/432-1700, www.maxtar.com	Easy to install.	Slow rotation speed.
	DiamandMax Plus 45	♦♦½	$180	45.0GB	7,200 rpm	100 MBps	408/432-1700, www.maxtar.com	Easy to install.	Pricey; slow seek speed.
Quantum	Fireball Plus LM	♦♦♦	$135	30.4GB	7,200 rpm	66 MBps	408/894-4000, www.quantum.com	Inexpensive; easy to install.	Slow bus speed.
Seagate	Barracuda ATA III	♦♦♦½	$190	40.0GB	7,200 rpm	100 MBps	405/936-1200, www.seagate.com	Very fast; easy to install.	None.
	U Series 5	♦♦♦	$155	40.0GB	5,400 rpm	100 MBps	405/936-1200, www.seagate.com	Inexpensive; easy to install.	Slow rotation speed.
Western Digital	Caviar WD400BB	♦♦♦	$169	40.0GB	7,200 rpm	100 MBps	949/932-5000, www.westerndigital.com	Fast; easy to install.	None.

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Cleaner 5

Legendary Compression Tool Adds Video Capture and Authoring

Terran Interactive's Media Cleaner Pro has always been the compression tool of choice for anyone producing audio and video for Web sites or CDs, thanks to its winning combination of superb compression quality, broad multimedia technology support, ease of use, and excellent documentation. The latest release, renamed Cleaner 5, has even better compression and workflow features and takes the first tentative steps toward streaming-video authoring.

From Capture to Compression

Cleaner 5's enhancements begin with the video-capture process itself. The program now includes Digital Origin's MotoDV FireWire capture software, whose DV codecs can deliver better image quality than QuickTime's. Since Cleaner isn't a video editor, you'll still need a separate program to refine your content. Cleaner 5 does a better job of removing noise than its predecessors. Several of its filters are faster, and they support dual-processor Power Macs.

Cleaner 5's new file-transfer features upload freshly compressed content straight to a server—no need for a separate FTP utility. And Cleaner's new workflow features will aid high-volume content providers. The program now relies on XML-based text files, with commands that control compression settings, batch processing, and file-transfer tasks. This allows you to create a custom database application or a set of scripts to generate those files for you.

Beyond Basic Video

This version is the first to offer event-oriented authoring features, with an EventStream window where you specify which events occur during playback. You can set Web pages to display at specific times, place synchronized text captions below video content, or create hot spots that turn a movie into a menu, with each option leading to a different Web page.

Cleaner 5 can apply most event types to QuickTime, RealSystem, and Windows Media formats. It lets you export events as an XML file or import XML event lists created in other programs, such as a database. No other tool has these talents.

On the downside, Cleaner's EventStream window is a bare-bones authoring environment, a simple list of events and their options, which makes it difficult to rearrange or copy and paste events. I'd prefer a timeline-style display, with draggable icons to represent events.—JIM HEID

Streaming Events Cleaner 5's EventStream window (right) lets you assign events to specific playback times. Here we're adding closed captions to a video clip.

CLEANER 5

Rating: ♦♦♦♦½

Pros: Excellent compression quality; supports all streaming platforms; powerful new workflow, capture, and authoring features.

Cons: Crude authoring environment.

List price: $599; upgrade, $179

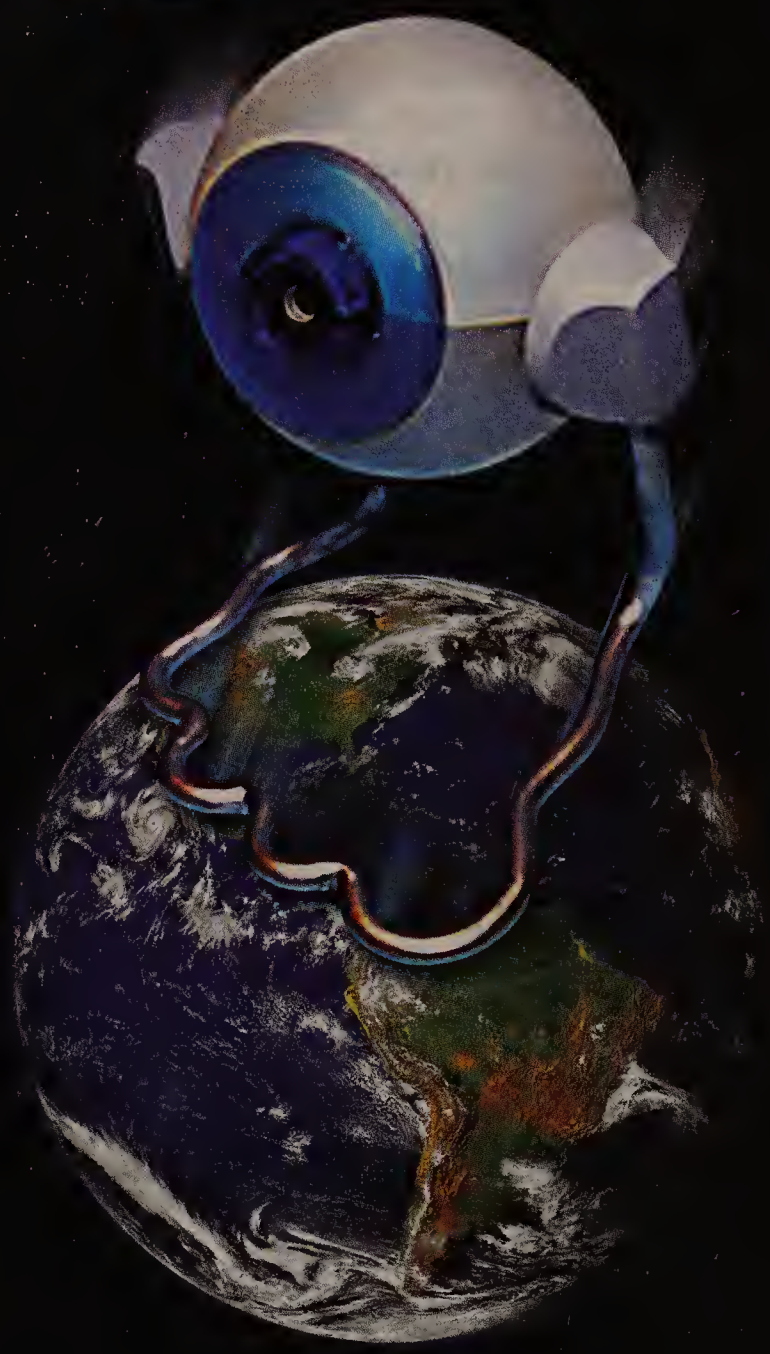
Company: Terran Interactive, *800/577-3443*, **www.terran.com**

MACWORLD'S BUYING ADVICE:

Cleaner 5 is the ultimate audio and video compression tool, combining the best quality and broadest technology support available with timesaving workflow features. Its new authoring environment lets you add interactive value to streaming content, though the event editor could use some polish. Bottom line: Nothing streamlines streaming like Cleaner 5.

"HOUSTON..."

"THE iBOT™ HAS LANDED."



THE FASTEST WEB CAM ON EARTH

Orange Micro is first to market with the iBOT, a FireWire-based desktop video camera. iBOT harnesses the speed and power of FireWire unmatched by the slower USB-based web cams. In fact, the inexpensive iBOT uses the same IEEE 1394 technology built into pricey DV camcorders costing over 7 times as much. Orange Micro's iBOT is the desktop video camera for the rest of us, providing crisp, clear video at a price you can afford. (640x480 @ 30 fps)

The iBOT supports all known software for the following applications: simple video editing, presentations, video teleconferencing, video e-mail, and video monitoring / surveillance. The iBOT pro version includes a microphone and additional free software.

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Eye Candy 4000

Photoshop Filters Drip with Options and Improvements

Adobe Photoshop and other image editors are powerful, but their built-in effect filters are often limited in number and scope. Third-party plug-ins aim to fill the void, and one of the best is Alien Skin Software's Eye Candy 4000. This update to Eye Candy 3.0 (*Reviews*, August 1997) works with Photoshop 4.0, Fireworks 2, Adobe ImageReady 1.0, and Deneba Canvas 6.0 (and later versions of each). Although only 5 of the 23 filters are new, improvements to the older filters and the interface make this a smart buy whether you're upgrading or trying Eye Candy for the first time.

Excellent Interface

Eye Candy 4000 bests the previous version's offbeat interface by incorporating industry-standard features such as tabbed palettes. The well-organized tabs offer easy access to dozens of controls, including the new Color Gradient and Bevel Profile editors. Another welcome change makes the preview window resizable and potentially many times larger than Eye Candy 3.0's.

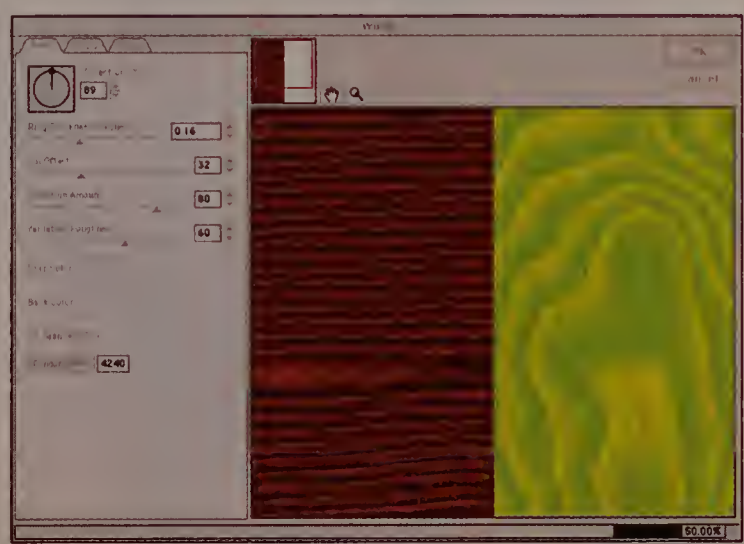
When you launch a filter, the Eye Candy commands take over the menu bar. Well-planned new options include unlimited undo and redo and the ability to switch to other filters within the preview window.

Eye Candy 4000 is simple for both pros and novices. Each filter has several presets, which you can quickly customize for unique effects via sliders or numeric values. The Random Seed feature lets you experiment further by merely clicking a button.

It's a good thing the application is intuitive, because it provides meager built-in and online help. Thankfully, the printed manual is excellent.

Tricky Rendering

Eye Candy 4000 requires a PowerPC processor and at least 32MB of RAM, but you may want more. We tested the program on a 450MHz G4 with 128MB of RAM, and still found rendering slow at times. However, if you're using the plug-ins in Photoshop, you can take advantage of a new feature to speed rendering time: just specify absolute units and you can work on 72-dpi images, which render quickly. Save your settings, then apply them to higher-res images to get the same effects.—TERRI STONE



Fine Grains One of Eye Candy 4000's best new filters, Wood, can create fabulous effects in a matter of seconds.

EYE CANDY 4000

Rating: ♦♦♦♦½

Pros: Improved interface; five new filters; well-written printed manual.

Cons: Slow rendering of high-resolution images; inadequate electronic help resources.

List price: $169; upgrade, $69

Company: Alien Skin Software, 888/921-7546, **www.alienskin.com**

MACWORLD'S BUYING ADVICE:

If your effects needs go beyond the filters built into image editors like Photoshop and Fireworks, Eye Candy 4000 is a solid choice. The accessible interface helps you create nearly endless variations on 23 filters with ease.

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PL500 LCD Pen Tablet System

Innovative but Pricey Display Lets You Draw Directly on Your Screen

You might be a graphic artist who is fed up with the mouse and who has never quite gotten the hang of using a pen tablet. If so, you might want to take a look at Wacom's new PL500, a 15-inch LCD that you can draw or paint on with a pressure-sensitive stylus. It's unique—but it's a bit expensive for what it offers.

The PL500 is only about two inches thick and weighs a mere ten pounds. It uses USB for the graphics-tablet functions and DVI for the display—so it works only with G4 Power Macs. For older Macs, it requires a digital video card, such as the $180 Voodoo 4 from 3dfx (www.3dfx.com). Priced at $3,999, the PL500 also requires a rather hefty bank account. Wacom also offers the $2,999 PL400, which has a 13.3-inch screen, and the $2,199 PL300, which has a 10.4-inch screen.

In Living Color

The PL500 is larger than Wacom's other LCD tablets, and it offers a better image—it's the first of Wacom's PL line to offer a 24-bit LCD, for millions of colors. It's also brighter than previous models, and it has better contrast.

Drawing on the PL500 takes some getting used to, however, just as using a normal Wacom tablet does. Because the tablet surface is a fraction of an inch above the LCD screen, the tip of your stylus doesn't actually touch the on-screen image. Simply put, it feels a little odd. If you expect using the PL500 to seem just like drawing on a piece of paper, you're going to be somewhat disappointed.

The PL500 ships with a standard Wacom pen that supports 256 levels of pressure (the more levels of pressure a pen can sense, the smoother the curves and gradations between shades of gray it can produce). A rocker switch by the nib has two programmable buttons for quickly issuing commands such as Select All and Save.

The pen can also simulate a pencil, since it has an eraser on the end. You can opt to set the eraser as a brush or any other tool, and just like the pen tip, the eraser is pressure sensitive. It seems a little curious, though, that Wacom did not choose to include one of its Intuos pens, which support 1,024 levels of pressure and a host of other features.—BEN LONG

Electric Canvas The PL500 is an LCD monitor with an invisible, embedded tablet.

KEVIN CANDLAND

PL500 LCD PEN TABLET SYSTEM

Rating: ♦♦♦½

Pros: Innovative design allows drawing on screen; beautiful LCD; pen has two programmable buttons and an eraser.

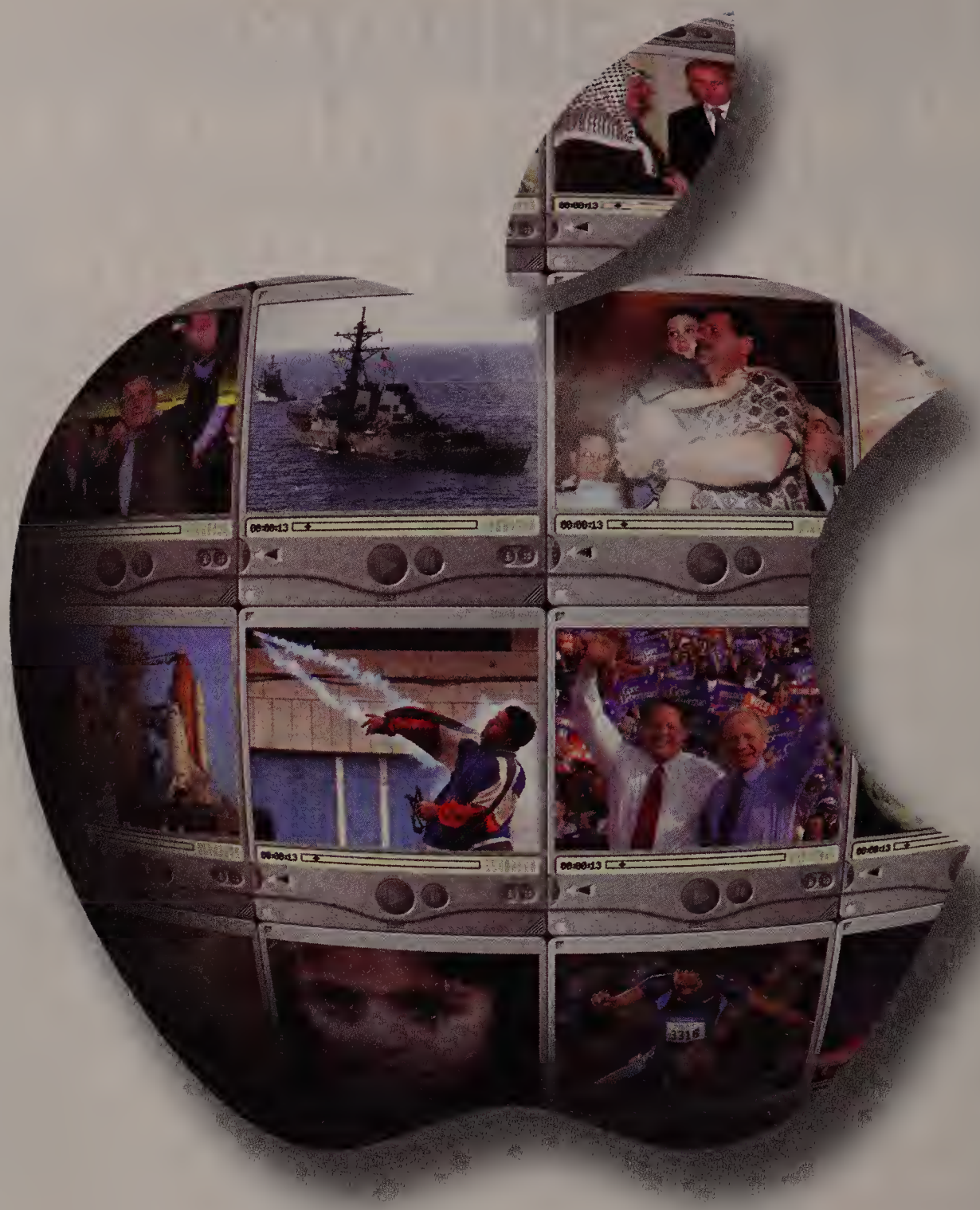
Cons: Very expensive; pen supports only 256 levels of pressure.

List price: $3,999

Company: Wacom Technology Corporation, *800/922-9348*, **www.wacom.com**

MACWORLD'S BUYING ADVICE:

The PL500 might seem to be a bit of a luxury, since drawing and painting with a regular Wacom tablet is relatively easy—once you get used to it—and most high-end tablets ship with more-sensitive pens. But if you need an intuitive, easy-to-use interface for a kiosk or presentation, the PL500 might be well worth its price.



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PageSpinner 3.0

Easy-to-Use Web Tool Has a Few Quirks but Is Still a Great Value

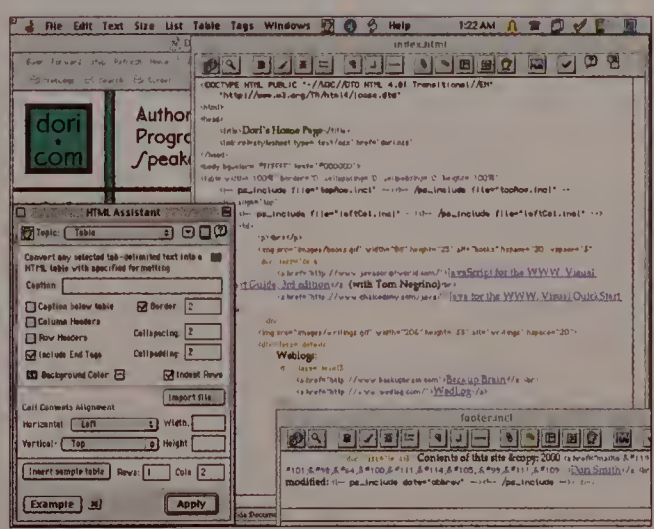
With the death of Adobe PageMill and every other WYSIWYG Web editor under $300, the field of affordable Web authoring tools has narrowed to just one: Optima's PageSpinner 3.0.1. It offers features not found in programs several times the price, but it still shows a few rough shareware edges.

PageSpinner is actually a suite that includes StyleSpinner (for writing Cascading Style Sheets [CSS]), FAQ-Spinner (for writing FAQs), and MailSpinner (for publishing Eudora-based e-mail on the Web). It comes with public-domain clip art.

PageSpinner is neither a Web designer's tool like Macromedia's Dreamweaver nor a Web programmer's tool like Bare Bones' BBEdit, but something in between. While you see every HTML tag you write (as in BBEdit), the content between those tags appears as it would in a browser (as in Dreamweaver). Extremists on both ends will find this unacceptable, but it might be just the ticket for the masses in the middle.

With PageSpinner's latest upgrade, Optima has brought the program up to current Web standards. It now supports HTML 4.01 and XHTML 1.0. And unlike BBEdit, it helps you add both JavaScript and CSS to your pages. You don't need to know how these work; just fill out the fields in an assistant, and PageSpinner does the coding for you. Its code isn't as lean as that written by a knowledgeable person, but it's comparable to anything produced by PageSpinner's WYSIWYG competitors, which cost ten times as much.

However, PageSpinner isn't ready to completely supplant the big timers. To change a tag's attribute, you have to delete the tag and re-create it—if you try to edit an existing tag, PageSpinner will insert a new tag, sometimes right in the middle of the current one. And while the HTML checker generally works well, it did flag some error-free code and missed a few minor errors, and it doesn't check CSS or JavaScript. PageSpinner uses AppleScript to find and replace text across pages, causing a significant performance hit. And with no built-in FTP capability, PageSpinner uses AppleScript to talk with third-party programs.—DORI SMITH



Quasi-Wizzy PageSpinner's approach to Web pages falls between WYSIWYG and plain-text editors.

PAGESPINNER 3.0.1

Rating: ★★★½

Pros: Easy to learn; capable; inexpensive; handles CSS and JavaScript.

Cons: Doesn't allow you to modify tags; HTML checker needs improvement; slow at some tasks; relies on AppleScript for FTP.

List price: $30

Company: Optima System, **www.optima-system.com**

MACWORLD'S BUYING ADVICE:

At $30, PageSpinner is a great bargain and the simplest way to learn to write HTML on the Mac. Although its editing style is a little quirky, it's definitely worth downloading and trying out.

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The essentials of imaging

MINOLTA QMS

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Peak VST 2.5

Update to Professional Audio Editor Supports VST Plug-ins

When we last looked at Peak, the professional two-track, disk-based audio editor from Berkley Integrated Audio Software (BIAS) had turned 2.0 (*Reviews*, September 1999). That update added a new interface, support for 24- and 32-bit files, and enhanced audio scrubbing to the program's existing features: waveform editing; region, loop, and fade creation; the ability to download sound files to hardware samplers; and DSP operations such as normalize and reverse. With version 2.5.3, Peak refines many of the features introduced in versions 2.0 and 2.1 and adds a long-awaited new function.

New . . .

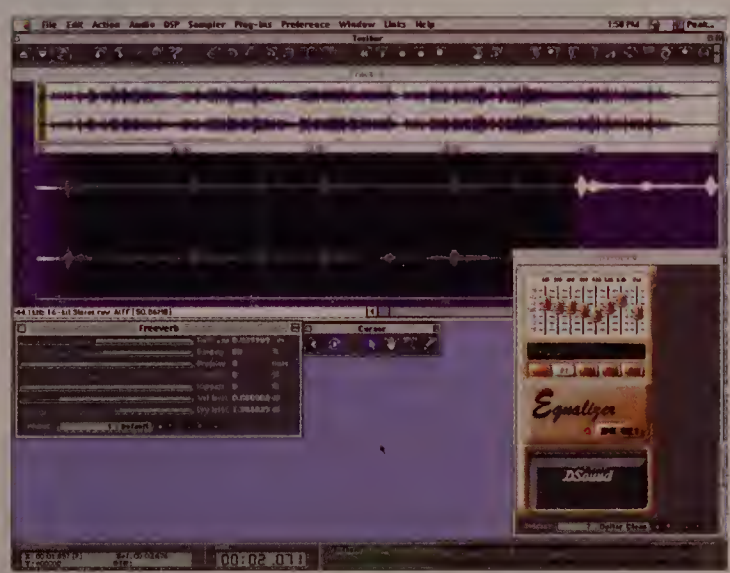
The "VST" in Peak's name reflects the program's most important new feature—support for Steinberg's popular VST plug-in format. VST support is a boon for those who have amassed a collection of these plug-ins, but others needn't feel left out: Peak VST includes 29 VST plug-ins, including a decent reverb and delay, as well as more exotic effects such as ring modulation. If you want to add more than one effect to your sound files, you'll be pleased to know that you can apply as many as five VST plug-ins.

Peak continues to support Adobe Premiere and Digidesign Audiosuite plug-ins. If you need support for TDM plug-ins, you must purchase the $699 Peak VST TDM Edition.

And Improved

Version 2.0 had a more colorful visage than its predecessor—in fact, its buttons were so vivid that it was often difficult to determine their functions. Thankfully, this version tones down the buttons and adds text balloons explaining the purpose of each. And BIAS has put ASIO (Audio Stream In/Out) drivers—for third-party audio cards—on the CD-ROM.

Encoding MP3 files remains a kludgy process. You must download Macromedia's SWA Export Xtra plug-in, and the actual encoding is time-consuming. Even when we heeded the manual's advice to lower our Mac's disk-cache setting, Peak, at its "quick" setting, took nearly three times longer than SoundJam to encode a five-minute AIFF file.—CHRISTOPHER BREEN



Popular Plug-ins Peak VST 2.5.3's VST plug-ins are easy to manipulate (though they get in the way on a small screen).

PEAK VST 2.5.3

Rating: ♦♦♦♦

Pros: VST support; improved interface; includes ASIO drivers.

Cons: Slow MP3 encoding; less stable with lots of extensions.

List price: $499

Company: Berkley Integrated Audio Software, *800/775-2427*, **www.bias-inc.com**

MACWORLD'S BUYING ADVICE:

Peak is a solid, professional two-track audio-editing application, and VST support makes Peak VST 2.5.3 an even worthier addition to multimedia and sound studios. Just be aware that it's prone to crashes when running on a Mac jammed full of extensions; it's most stable with a stripped-down System Folder.

WatchGuard SOHO

Security Appliance Offers Pricey Protection for Small Networks

WATCHGUARD SOHO

Rating: ♦♦♦

Pros: Easy configuration; good performance.

Cons: Expensive; poor Web-blocking filters.

List price: $449

Company: WatchGuard Technologies, *800/734-9905*, **www.watchguard.com**

MACWORLD'S BUYING ADVICE:

Software gateways such as the $89 IPNetRouter (*Reviews*, January 2000) offer basic Network Address Translation at a fraction of the WatchGuard SOHO's cost, but they require a computer to act as a gateway. Broadband routers, which cost about $250, integrate firewall features, but your ISP might not support them. For those who can't use one of these solutions, the WatchGuard SOHO offers a reasonable, if pricey, alternative for protecting your network.

Although DSL and cable modems give you the speedy, always-on Internet connectivity you crave, they also make you a target. In the week I spent evaluating the WatchGuard SOHO—a small-network firewall from WatchGuard Technologies—intruders probed my supposedly unknown test network two or three times a day. Using Network Address Translation, packet filtering, and SOCKS proxy, the SOHO successfully guarded my Macs and PCs from unwanted advances, but I encountered a few glitches along the way.

Plugging In

Upon opening the box, you'll find just the small, bright-red SOHO and an Ethernet cable—no software and no documentation. Your Internet connection plugs into the SOHO's WAN port, and your computers connect via an integrated four-port hub. You can also connect the SOHO to your own hub and support up to 50 computers (the standard license supports 10).

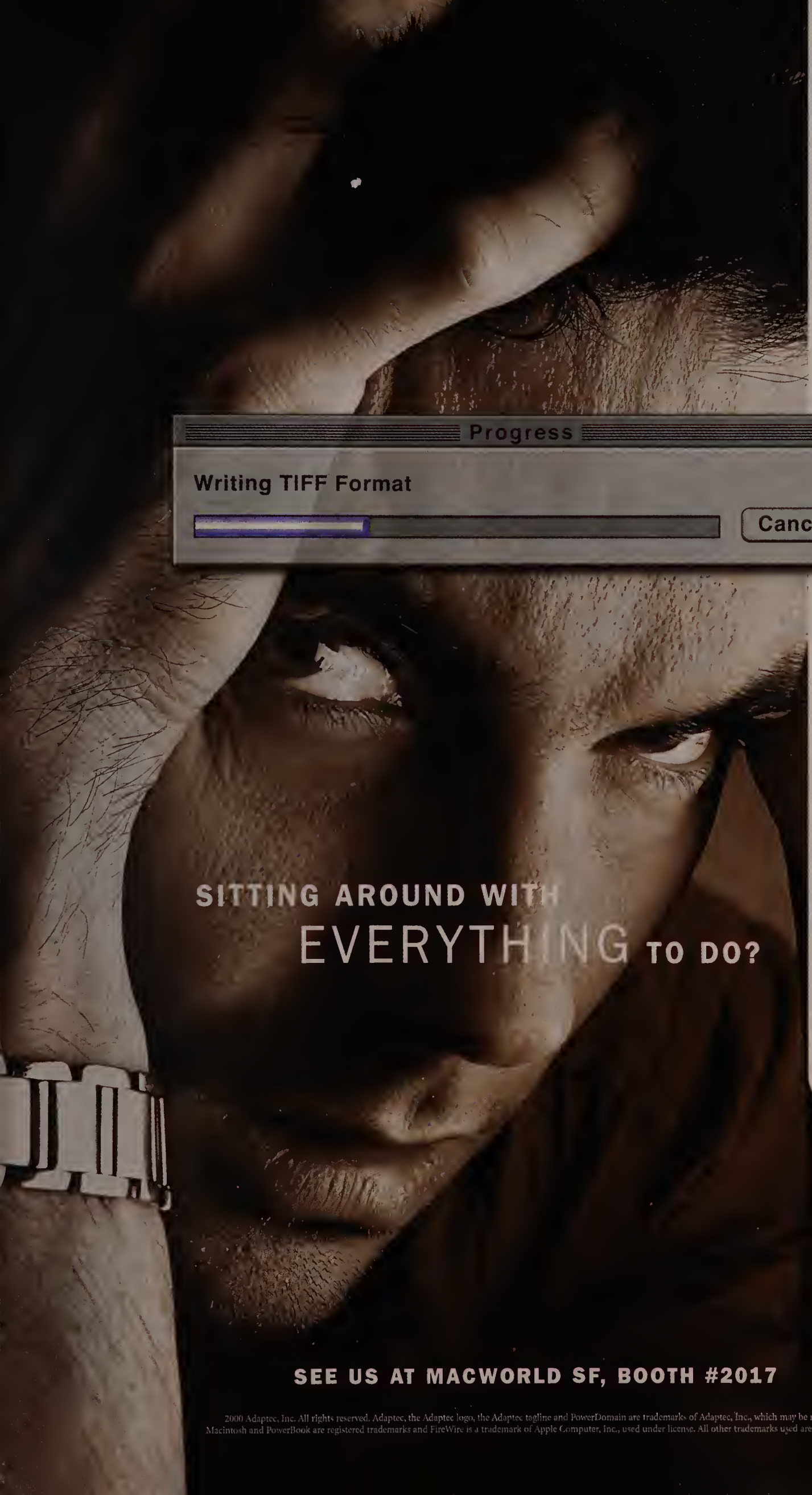
With the physical connections in place, you configure the SOHO via a Web browser. You can set the SOHO's Internet IP address manually or configure it to receive this information from your ISP. (The device also supports PPP over Ethernet.) You then assign private addresses to the SOHO and to computers on the internal network, a process simplified by the device's built-in DHCP server. Clients don't require special proxy settings or software.

Someone to Watch over Me

When users on the LAN initiate connections with Internet servers, the SOHO forwards packets back and forth, logging and discarding any unsolicited ones. You can fine-tune the firewall's security using its unusually flexible filters, which forward incoming packets to specific computers based on port, protocol, or IP address; outgoing filters can restrict access to certain Internet services. You can even upgrade the SOHO to support VPN tunnels with another WatchGuard firewall.

GIBSON

I tested the SOHO on fractional T1 and dedicated-modem connections, and all services worked reliably. The firewall's performance matched that of a direct connection, except when a RealMedia video download dropped from a 221K stream to 34K. I also had problems with the Web-blocking feature; its blocking lists contain many glaring omissions, and the option failed if I placed the SOHO behind another firewall.—J.W. DAVIS



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FunnelWeb 4.0

Web-Log Analyzer Makes Gorgeous Graphs of Your Data

FUNNELWEB 4.0.1

Rating: 3½

Pros: Clean interface; beautiful graphs and charts; extensive report library; HTML output.

Cons: High RAM requirements; lacks Web-based administration; no Microsoft Word or Excel output.

List price: $399; FunnelWeb Enterprise, $1,199

Company: Active Concepts, *800/551-5282*, **www.activeconcepts.com**

MACWORLD'S BUYING ADVICE:

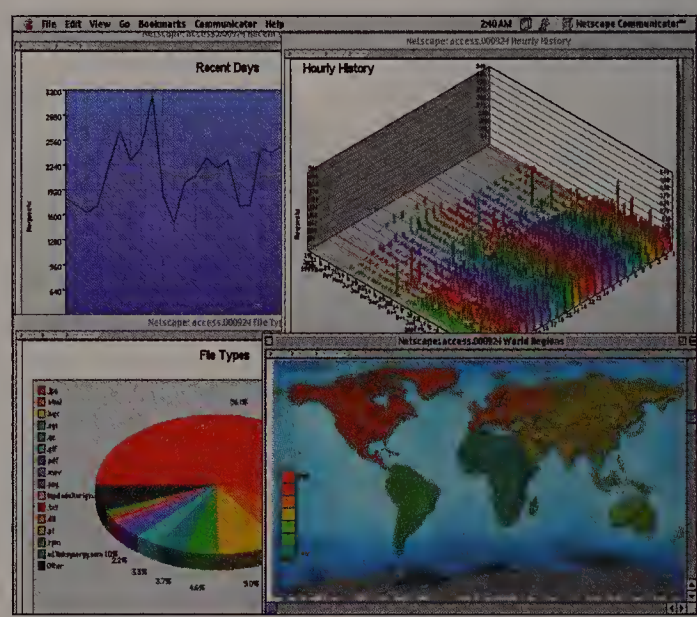
If you're running a smallish Web site, FunnelWeb 4.0.1 gives you hassle-free analysis and excellent reports. Despite minor drawbacks, it's a fully capable Web-log analyzer. If you're operating a large corporate site spanning multiple servers, you'll need FunnelWeb Enterprise's extra features.

In the competitive world of Web publishing, what you don't know can put you out of business, which is why savvy Webmasters keep extensive logs. Active Concepts' FunnelWeb 4.0.1 takes on the task of grappling with megabytes of this log data, slicing and dicing it to give you an elegant visual representation of your traffic.

FunnelWeb has a new interface, which flows from step to step much more logically than in previous versions. It can now download logs from multiple servers, and crunch the data on your preferred schedule. And because the program can handle data even in compressed form, it works much faster than previous versions. FunnelWeb limits you to ten virtual domains and 5 million hits per log section.

The reports consist of stunningly beautiful 3-D charts and tables, which you can save as HTML or in myriad other forms such as PDF, JPEG, and comma-delimited text. (Active Concepts also offers an Enterprise edition, which gives you unlimited analysis capabilities and a bevy of additional reports.)

FunnelWeb has helpful features such as DNS caching to speed IP-address resolution, incremental analysis to crunch log files in small chunks, domain aggregation to group multiple domains on the same report, and e-mail on completion. The Enterprise edition can also collect detailed records of user sessions, track sessions across multiple servers, and report on the paths visitors take through a site.



Visualizing Information FunnelWeb distills megabytes of Web-log statistics into strikingly beautiful graphs and charts that help you quickly spot significant trends.

FunnelWeb still needs a lot of RAM—it demanded 256MB to analyze a 200MB file. And you can't save your data as Microsoft Word or Excel files, which makes for a lot of extra formatting. Also, it lacks a Web-based administration tool (as found in the competing Windows product WebTrends), so for remote operation you have to use third-party software. But FunnelWeb reports are hypnotically appealing and worth these inconveniences.—MEL BECKMAN

You think your kids are safe on the Net. Think again...

ContentBarrier. The new Parental Control solution for your Macintosh.

You don't let your kids read just anything, do you? Well, when they surf the Internet, they can see whatever they want, unless you're there to watch over their shoulders. With ContentBarrier, the Internet is a safer place for your children.

ContentBarrier sets up a protective wall around your computer. Its pre-defined categories let you choose what you don't want your children to see, and you can also create your own custom categories. Inappropriate web sites are blocked, shielding your children from things they are too young for.

ContentBarrier blocks adult web sites, sites with subjects not fit for children, and even blocks chats when predatory language is used. It blocks all offensive content coming from the Internet.

ContentBarrier works with multiple users; if you have several children, you can set different criteria, corresponding to their age or maturity. You can choose whether they have access to newsgroups, e-mail, or whether they can download files. You can set the program to let them only use the Internet at certain times, and on specific days. The program can even send you e-mail, automatically, when certain events occur.

ContentBarrier keeps a complete log of all web sites visited, whether blocked or not. This allows you to have a full record of exactly what your children are doing on the Internet. You can also take an inventory of your children's computer, and find all pictures, movies, music files and web pages.

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Combustion 1.0

Powerful but Expensive 3-D–Compositing Tool Fires Up the Mac

COMBUSTION 1.0

Rating: ♦♦♦½

Pros: Powerful 3-D compositing; exemplary tracking, painting, keying, and color correction.

Cons: Expensive; minor bugs; inflexible text.

List price: $3,495

Company: Discreet, *800/869-3504*, **www.discreet.com**

MACWORLD'S BUYING ADVICE:

Combustion may do more than either the After Effects Production Bundle or Commotion Pro, but that doesn't justify its cost (equal to both those programs' combined). Still, it delivers first-rate results, and if you need robust 3-D compositing, it's the only game in town. Just make sure you have a blazingly fast computer—and money to burn.

Discreet, maker of SGI video applications with such incendiary names as Flame and Inferno, is now blazing a trail on the Mac. Combustion 1.0 combines the main strengths of Adobe After Effects and Pinnacle Systems' Commotion with a breakthrough feature all its own: true 3-D compositing. The result is a video powerhouse that makes high demands on both computing and purchasing power.

A Whole New World

In addition to its 400-page tutorial, Combustion comes with a special guide to help After Effects users shift from 2-D compositing into 3-D. This is a wise move, since Combustion has a unique look and approach. The program delivers a totally 3-D environment, with unlimited layers and lights, complex reflectivity, and a fully animatable camera. Layers are still flat (although you can hinge them together), but shadows, lighting, and focus controls lend depth to routine compositing jobs.

Although Combustion implements 3-D with stunning finesse, After Effects users will miss some features, including composition and layer markers and time remapping. And the text features are disappointingly inflexible; click away from the text tool, and you can no longer edit text.

Consistent with its SGI origins, Combustion offers extremely well-developed, detailed motion tracking, painting, keying, and color correction—not your typical version 1.0 tools. The program accepts many Adobe Photoshop and After Effects plug-ins; it even one-ups After Effects by letting you edit imported Illustrator art. But Combustion does suffer from some new-release bugginess. These minor problems, along with upcoming multiprocessor G4 support, make a compelling argument for holding off until Discreet releases an update.

When it comes to rendering, Combustion is hardly a house afire; because the program is always calculating in 3-D, rendering takes significantly longer than in After Effects. And although Combustion's powerful RAM previewing can greatly accelerate your workflow, you need at least a 450MHz G3 or G4 with 512MB of RAM if you want to experience anything like spontaneous Combustion.—GALEN FOTT

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Virtual PC 4 puts a fast, powerful PC inside your G3 or G4 Mac, enabling you to run PC applications, access PC networks, share files with PC-based colleagues, and use PC-only services and applications. The latest version of this award-winning software from Connectix runs PC operating systems up to twice as fast as previous versions, so it's easier than ever for Mac users to stay compatible with the PC world.

What's new in Virtual PC 4? Improved features in Virtual PC 4 include faster performance, larger disk images, easier to use interface and help system, and the ability to run multiple PC operating systems simultaneously. Run PC software faster and better than ever with Virtual PC from Connectix. Go to www.connectix.com for more information or to purchase Virtual PC.

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Strata 3Dpro 3.0

Integrated 3-D Package Delivers Power at a Reasonable Price

After languishing on the sidelines for years, Strata is back, with a new parent company, C3D Digital, and a new name: Strata 3Dpro 3.0. But while this update helps Strata retain its position as the most user-friendly 3-D application, with rendering and animation features comparable to more expensive packages, the Strata community may not find enough new additions here to make it worth the wait.

Just the Basics

At first glance, there's no noticeable difference between Strata 3Dpro and its previous incarnation, Strata Studio Pro. The distinctive interface and efficient workflow are unchanged, but behind the scenes you'll find support for the G4's AltiVec engine and multiprocessor environment.

Strata 3Dpro 3.0's implementation of standard 3-D tools for modeling, texturing, and animation are straightforward and intuitive, as are the comprehensive bone and inverse kinematics systems. The texturing tools come with a large library of textures and shaders and allow WYSIWYG texture editing directly on objects. For modeling, Strata's flexible Skin and Hull tools let you generate 3-D objects from 2-D curves. You can also convert objects into Bézier surfaces.

The Bad and the Good

Strata 3Dpro's tool set stops short of giving users full control over modeling and interface variables. Because the program calculates mesh-object resolution automatically, you can't customize the polygon count for optimal redraw and rendering times. It also lacks options for subgeometry component editing such as polygon extrusion and vertex welding. There are still no hot keys for panning, tilting, or zooming, and the program's single undo can be extremely limiting for professional production work. Strata 3Dpro does directly import the Amapi model format, however, so users have access to a spline-based modeler.

Where Strata 3Dpro really delivers is in rendering. The ray-tracing and radiosity renderer offers fine numeric control over shadow quality, primary light-ray fidelity, even the number of secondary light rays, letting you balance image quality and rendering time. The result is photorealistic still images and QuickTime movies at up to broadcast or film resolution.—MATTHEW LOWRIE

Hidden Power Strata 3Dpro's Esoterica settings let you fine-tune your images.

STRATA 3DPRO 3.0

Rating: ♦♦♦♦

Pros: Relatively inexpensive; easy to learn; powerful rendering features.

Cons: Limited modeling tools; frustrating interface controls.

List price: $595

Company: C3D Digital, *800/678-7282*, **www.3d.com**

MACWORLD'S BUYING ADVICE:

With 3Dpro 3.0, Strata lives up to its reputation as a viable and affordable integrated 3-D solution for the Mac. The price should be attractive to architects and designers looking for a quality 3-D–production tool, as well as to enthusiasts looking for an introduction to the world of 3-D. More-experienced 3-D professionals will find Strata easy to learn, but they may find its modeling and interface features limiting.

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Script Debugger 2.0

AppleScript Development Environment Adds Powerful New Features

AppleScript is simultaneously one of the most-powerful and one of the least-used Macintosh utilities, the latter partially due to serious deficiencies in Apple's own Script Editor. Late Night Software's Script Debugger 2.0.3 makes AppleScript more usable by providing a powerful yet accessible development environment, though compatibility issues and high cost limit its usefulness.

Code Tracing and Bug Tracking

The latest version of Script Debugger adds a troop of features. For example, while the previous version could debug only global variables, Script Debugger 2.0 can also track local variables. You can set break points and watch points, and the program supports the ability to step into, over, and out of handlers. The included AppleScript debugger dialect lets you follow scripts outside Script Debugger itself—a requirement for testing CGIs, droplets, and folder actions.

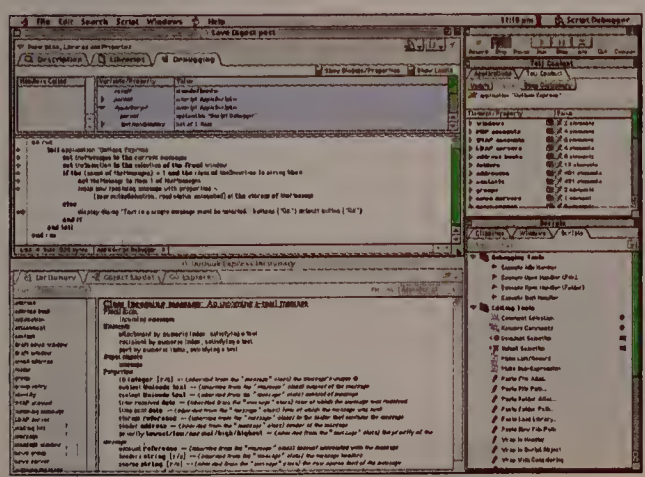
The attractive tabbed-palette interface allows easy access to clippings, application dictionaries, open windows, and scripts, and you can rearrange or hide the tabs. The main editing window supports split-pane editing and optional soft wrapping.

Script Debugger's primary competitor is the recently released Scripter 2.5 from Main Event Software (www.mainevent.com). The two programs are identically priced and fairly comparable, although each has its vocal proponents. However, when Main Event released its latest upgrade, it also released a light version of Scripter—the $89 Scripter Personal Edition. If you haven't yet ventured into AppleScript's depths, you can dangle your feet in the water with Scripter Personal Edition—and save $100, to boot.

Verbose Scripts No Problem

If you're a hard-core scripter, you'll find a lot to like in Script Debugger 2.0. Unlike the competition, it can handle scripts larger than 32K. Also unlike the competition, Script Debugger is itself scriptable, which enables it to interact with utilities and allows its scripts to change themselves.

But these new features are not without flaws. You can't use Script Debugger to script Microsoft Word 98 or Excel 98, nor can you use the program to debug AppleScript inside Digital Technology's FaceSpan, a scripting and user-interface–creation utility.—DORI SMITH



Tracking Down Bugs Script Debugger 2.0 lets you access everything your script might need.

SCRIPT DEBUGGER 2.0

Rating: ♦♦♦♦

Pros: Supports scripts larger than 32K; scriptable.

Cons: Can't script some widely used programs.

List price: $189

Company: Late Night Software, *888/999-3210,* **www.latenightsw.com**

MACWORLD'S BUYING ADVICE:

If you own Script Debugger 1.X or you're hitting the 32K limit on script size, this is a must-have upgrade. But if you've never scripted before, Script Debugger 2.0 may be overkill. Main Event Software's Scripter Personal Edition offers an easier, less expensive way to get started with scripting.

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Silicon Graphics 1600SW

Wide Flat-Panel Monitor Is Excellent for Graphics, Limited for Everyday Use

Flat-panel displays are wondrous—their small footprints, compared with those of CRT monitors, open up vast areas of space on your desk. The 17.3-inch Silicon Graphics 1600SW provides a wide, high-resolution display with vibrant colors, and it offers a host of useful features, but its aspect ratio might be a bit too constraining for some.

The 1600SW has two native resolutions, 1,600 × 1,024 and 800 × 516. At the higher resolution, this monitor is clearly at its best: fill the entire screen with a single photographic image, and the 1600SW's brightness, saturation, and detail will astound you. But screen objects are tiny, and the consensus at our office was that the text was too small for everyday work. In the lower native resolution, 800 × 512, objects on the screen are big, but icons and text look blocky. Unfortunately, there is no happy medium—selecting another resolution places a window inside the available screen real estate, defeating the purpose of a large screen. You can magnify the screen image at the touch of a button, but this, too, results in big, chunky screen objects.

This is the only flat panel with adjustable color temperature—it has both a red and a blue backlight, and you can adjust the brightness of each for a variety of hues.

Overall, the display is uniform and sharp. Unlike humbler LCDs, such as the ones that grace PowerBooks, the 1600SW has a clear picture when viewed from many different angles. However, when viewed from above, it washes out slightly.

The 1600SW comes with Silicon Graphics' MultiLink Adapter, a small external box that converts the monitor's LVDS signal to analog (for use with any Mac but with even fewer resolution choices), or to DVI, a language that the latest G4 towers can understand. But you'll need a $48 adapter from Belkin (www.belkin.com) to convert the latest G4's ADC port to DVI. At press time, the 1600SW does not operate at its native resolutions when used with pre-ADC G4s. If you have a Mac with an open PCI slot, you can also purchase the 1600SW with a Formac Proformance 4 card, instead of a MultiLink adapter, for the same price.—DAVID WEISS

SCOTT PETERSON

SILICON GRAPHICS 1600SW

Rating: ♦♦♦½

Pros: High resolution; brilliant color; color-temperature controls; adjustable stand.

Cons: Resolution choices are too limited; images wash out slightly when viewed from above.

Company's estimated price: $1,400

Company: Silicon Graphics, *800/800-7441*, **www.sgi.com**

MACWORLD'S BUYING ADVICE:

The Silicon Graphics 1600SW may greatly improve the lives of those who work primarily with graphics. But for basics—moving files around and working with text—screen images are either too big or too small. There are excellent 15-inch flat panels which, though smaller, have a comfortable native resolution of 1,024 × 768 and cost less.

HANDHELD MODULE HAS YOU COVERED—IF YOU CAN GET COVERAGE

VisorPhone

Rating: ♦♦♦♦

Pros: Clever software design on jumbo screen; extremely compact; earpiece provided.

Cons: Limited GSM coverage; the Visor's protective screen cover can't be attached when phone is in place.

List price $299 (with service contract)

Company: Handspring, *888/565-9393*, **www.handspring.com**

Macworld's Buying Advice: Thanks to its address-book integration, making calls using a VisorPhone is far easier than punching your kitchen phone's push buttons, which look antique in comparison. If there's GSM coverage everywhere you want to be, and you don't mind talking into what appears to be a pocket calculator, nothing should hold you back.

To those of you whose belts clank with enough gadgets to make Batman jealous, the Handspring VisorPhone will feel like a blessing. This clever snap-in module for the Handspring Visor adds a half inch to the PDA's height and depth but turns it into a terrific cell phone. And the module uses the Visor's touch screen, which is enormous compared with the puny screens on most cell phones.

Every feature is designed to save you steps. For example, when a call comes in, the VisorPhone module rings or vibrates, the Visor turns on, and the screen displays the phone number of the incoming call. If the Visor recognizes the number, you see the caller's name, too.

Because the VisorPhone is a GSM phone (the European standard), it has a long list of smartly designed features: three-way calling, call waiting, voice mail, call forwarding, and more. But GSM is just catching on in North America, so coverage is spotty. Worse, you don't have a choice of carriers; only one company services each part of the United States.—DAVID POGUE

SUZANNE ROADY

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CANON ENTERS PROFESSIONAL-DIGITAL-CAMERA FRAY

Canon EOS D30

Canon USA, one of the more prolific manufacturers of consumer-level digital cameras, recently introduced a model aimed at pro users and advanced amateurs. With its three-megapixel CMOS imager and crisp image quality, the EOS D30 would be a welcome addition to a photographer's camera bag.

Given Canon's history, it's not surprising that the EOS D30 incorporates such film-based features as three-point autofocus, multipoint light metering, and multiple shooting modes. And the D30 readily accepts most accessories, including Canon's EF autofocus lenses. But the camera's most noteworthy feature is that it incorporates a CMOS imager rather than a power-hungry CCD, without giving images the soft-focus look other CMOS-enabled cameras impart. The images are clear, have good color balance, and don't suffer from excessive noise problems. And the 1.8-inch LCD shows both captured images and menus; you can capture an image even if you're already using the LCD to select a different file size or to view images.—RICK OLDANO

KIRK AMYX

Rating: ♦♦♦♦

Pros: Flexible operation; good image quality; familiar controls; lightweight.

Cons: Images need fine-tuning in an image editor.

List price: $3,500

Company: Canon USA, 800/652-2666, **www.usa.canon.com**

Macworld's Buying Advice: Whether you're a professional photographer on a budget or a serious amateur, if you already have Canon lenses, the Canon EOS D30 will ease your entry into digital photography.

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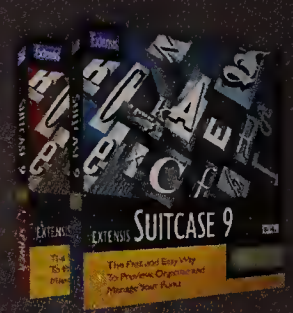

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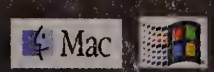

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FONT-CREATION TOOL OFFERS POWER WITHOUT ELEGANCE

FontLab 3.1

Since the advent of the Web, typography has taken a backseat to other design concerns. But those who want to produce their own typographical forms can turn to FontLab 3.1.2. The program, which helps you create new fonts, modify existing ones, and convert fonts from one format to another, is capable, but its interface makes rough work of designing fonts.

With FontLab, you can alter individual characters or entire typefaces and convert them from Mac to Windows and back. It offers many tools and multiple Undo levels. The program also lets you import characters from vector-based applications such as Adobe Illustrator and Macromedia FreeHand. You can save fonts in TrueType, Type 1, and Multiple Master formats.

However, FontLab was obviously made by a Windows-oriented crowd. The tool-bar icons are small, nondescriptive, and unlabeled. And because the documentation is completely Windows-oriented, with nary a Macintosh screen shot, FontLab is difficult to learn.

The program can also be difficult to use. You can export several characters to EPS format at once, using the Copy To EPS command—but the command is inconveniently hidden in the Symbol menu. And bringing characters back into FontLab is a singularly tedious task, entailing liberal use of the copy and paste commands.—ANDREW SHALAT

Rating:

Pros: Comprehensive typographer's tool with a wide range of format output choices; powerful typeface- and character-modification tools.

Cons: Primitive, confusing interface.

List price: $399

Company: FontLab, *877/366-8522*, **www.pyrus.com**

Macworld's Buying Advice: If you need to make custom fonts or modify existing ones, you might find FontLab a useful tool. Otherwise, you'll probably want to avoid the trouble of learning it and stick to buying ready-made fonts.

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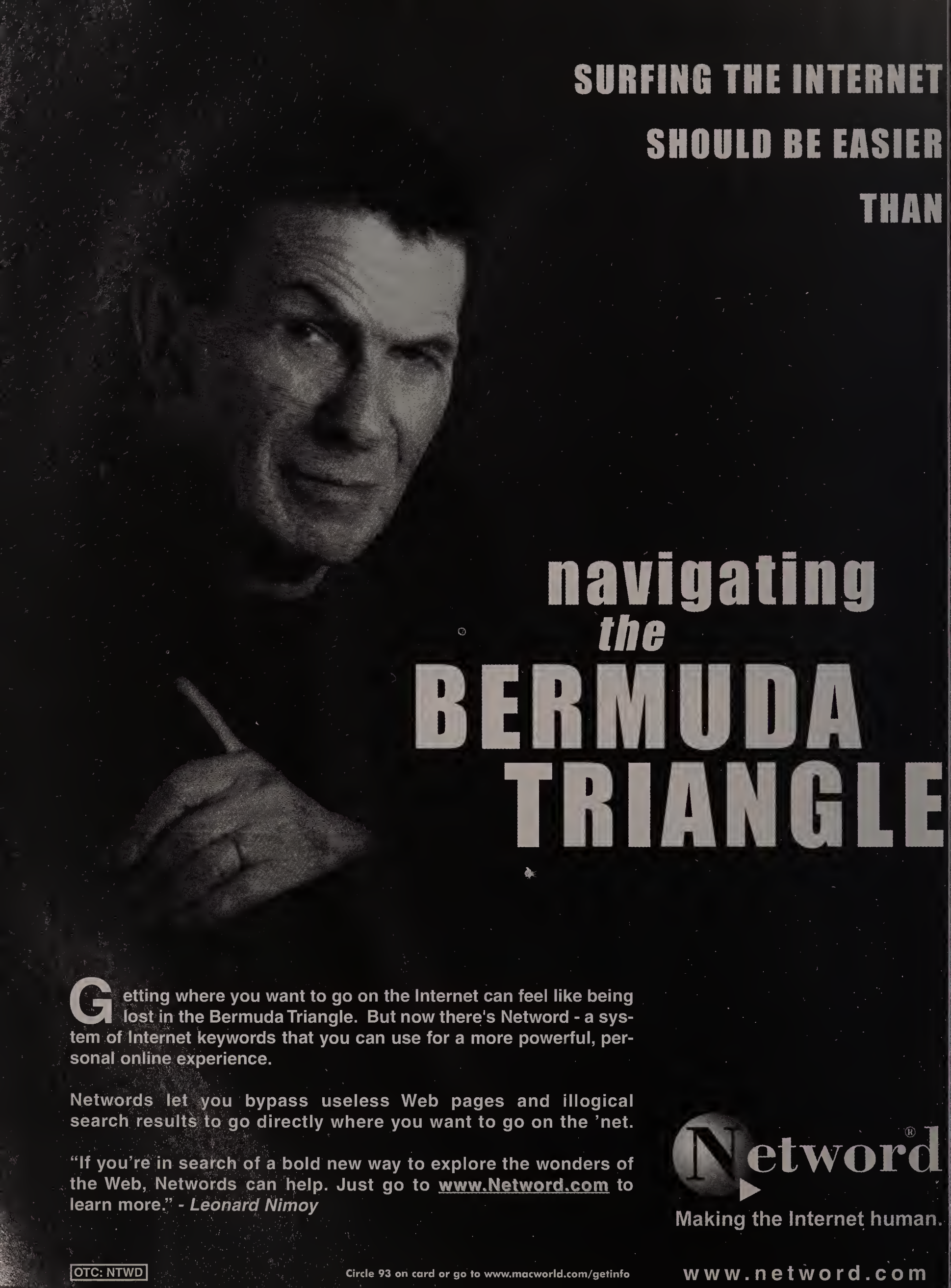

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WEB-SITE OPTIMIZER DOES HALFHEARTED CLEANUP

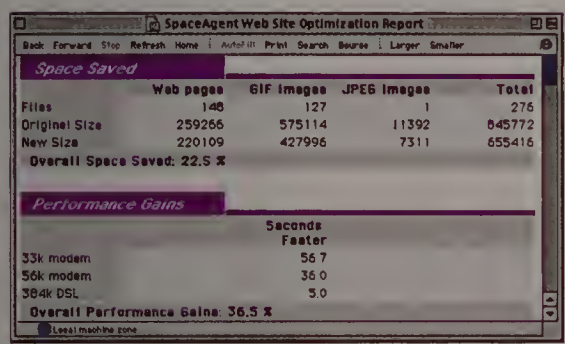
SpaceAgent 2.0

One way to make your Web site load faster is to use Insider Software's SpaceAgent 2.0.1, which attempts to slim down text and graphics files—with mixed results.

The graphics cleaner does an impressive job, slimming GIF and JPEG files by an average of 5 to 10 percent without noticeably affecting image quality. Unfortunately, SpaceAgent simply doesn't go far enough when it comes to text files. While it does remove extraneous characters from HTML and JavaScript files, it skips over XHTML and CSS files and ignores the extra bytes WYSIWYG programs add.

SpaceAgent also prevents you from using the site-management and FTP utilities built into most Web development programs: you have to finalize the site on your local hard drive, run it through SpaceAgent, and upload the resulting files to your server.

Version 2.5 should be available by the time you read this; the update ($250) improves JavaScript, XML, and ASP optimization and offers a new report format.—DORI SMITH



Optimistic Optimizing SpaceAgent's site-optimization statistics don't quite add up.

Rating: ♦♦♦

Pros: Does a good job of trimming GIF and JPEG files.

Cons: Doesn't clean up as much as it could from text files; adds steps to workflow.

List price: $70

Company: Insider Software, *800/700-6340,* **www.insidersoftware.com**

Macworld's Buying Advice: Given the limits of SpaceAgent 2.0.1's text-handling capabilities, you're better off doing a few find-and-replaces on your text. But if you want your graphics as lean as possible, this handy utility is worth checking out.

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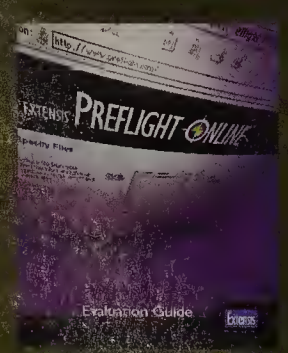

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CHARTING APPLICATION ADDS COMPELLING ANIMATION EFFECTS

Charts Pro 1.5

Despite its hefty price tag, Charts Pro 1.0 was hard to beat for generating stunning 2-D and 3-D charts with a minimum of effort (*Reviews*, February 1999). Charts Pro 1.5 adds the ability to create animated charts for Web-based and other electronic presentations, though some will still find the price prohibitive.

Four new chart animations top the list of enhancements. The most innovative effect, Forecasting, lets you create charts that morph from one data set to another. However, you have to save the values that determine the animation's ending point in a tab-delimited text file; whenever the data changes, you must reselect the file.

New graphic elements include axes with variable thickness and optional "walls." You can now display the numeric values associated with data markers, and you can choose symbols to represent data points in 2-D line charts. Charts Pro 1.5 supports text rotation at any angle, and it lets you export charts in several new file formats.—FRANKLIN N. TESSLER

Inside Walls Photographs add pizzazz to a 3-D chart created with Charts Pro 1.5.

Rating: ♦♦♦½

Pros: New animation effects and chart elements; more samples.

Cons: Expensive; demanding hardware requirements.

List price: $400; upgrade, $150

Company: Adrenaline Software, 877/724-2787, **www.chartspro.com**

Macworld's Buying Advice: Charts Pro 1.5 is an expensive one-trick pony, but it's more capable than ever. While many will welcome the program's novel animation effects and other improvements, current users will justifiably balk at the steep cost of upgrading.

POPULAR STATISTICS PROGRAM NOW OFFERS SCRIPTING

JMP 4

SAS Institute's JMP bucks the ported-from-minicomputers look of most statistics packages by offering a distinctively modern interface, and version 4 of this Mac statistics favorite offers an even more convenient tabbed interface and a powerful new scripting language.

JMP 4 organizes tests into convenient, tabbed menus. Under the Modeling tab is a new section of tests-for-time series. Under Data Handling, data tables provide more classification tags than before, and the program supports direct import of ODBC data. More significant for industrial users is a greatly expanded Design Of Experiments section.

The single most important new element, however, is a C-like scripting language that lets you use JMP to automate the test-report cycle. In addition to its value in testing and report generation, JMP's scripting language offers potent matrix commands that let you program custom statistics procedures in just a few lines of code.

Traditional statistics programs, which display menu test lists in the same order as standard textbook chapters, are generally a bit easier for beginners to use. But JMP's approach is logical, and with a modest amount of experimentation most users will soon find their way.—CHARLES SEITER

Rating: ♦♦♦♦½

Pros: Industrial-strength Design Of Experiments section; flexible scripting language.

Cons: Menu organization presents challenging learning curve.

List price: $895; academic price, $395

Company: SAS Institute, 800/727-3228, **www.jmpdiscovery.com**

Macworld's Buying Advice: For a wide range of statistical purposes, JMP 4 is the best Mac statistics software. Despite lots of enhancements, it's still compact and fast, and its new scripting language makes repetitive work quick and easy.

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VIDEO EDITOR FALLS SHORT OF COMPETITION

Canon Video Home Edition

Rating: 1/2

Pros: Inexpensive; allows you to import and edit video from non-DV camcorders.

Cons: Poor interface, weak features.

List price: $50

Company: Canon, *800/385-2155*, **www.software.canon.com**

Macworld's Buying Advice: Canon Video Home Edition is inexpensive, but that's all it has going for it. XLR8's $99 InterView 2.0 (*Reviews*, September 2000), though costlier, is a far better analog video editor.

What were they thinking? Canon, one of the titans of FireWire-based DV camcorders, has shipped a home video editor that doesn't support FireWire. Admittedly, Canon Video Home Edition is intended for capturing and editing analog video, but it's flawed on many fronts.

Its interface is awkward and does not support many Mac technologies—you can't drag media into the program from the Finder. It lacks an undo command, you can't make changes to a clip sequence you've saved as a movie, its titling features are weak (you can't mix and match fonts and sizes), and it can't export to a video device. It's also obviously a port of a Windows program, complete with a "minimize" icon.—JIM HEID

DRAG AND DROP BETWEEN MACS AND PCS

MacSOHO 1.0

Rating: 4 1/2

Pros: Easily connects a Mac to a small PC network; simple to install and use; nothing to install on the PCs.

Cons: Won't share a PostScript printer with a PC; no printed manual.

List price: $99

Company: Thursby Software, *817/478-5070*, **www.thursby.com**

Macworld's Buying Advice: No, you can't use it to share printers across platforms, but for sharing files, MacSOHO is the most intuitive cross-platform utility ever created.

You need to move files between Macs and PCs, but you work in a small office, and there's no networking expert at hand. Have no fear—Thursby's MacSOHO 1.0 is for you.

MacSOHO puts the NetBEUI protocol on a Macintosh for the first time, and the net effect is simple: You can drag and drop between platforms. Macs appear in Windows' Network Neighborhood window, and PCs show up on a Mac in MacSOHO's Network Neighborhood window.

MacSOHO is a breeze to install, unlike Thursby's TCP/IP-based Dave, which requires some PC-networking knowledge. Setup assistants for both platforms walk you through the steps.—JOHN RIZZO

EXCELLENT RESEARCH SOURCE EXPANDS

2001 Grolier Multimedia Encyclopedia

Rating: 4

Pros: Impressive depth of content; beautiful, informative illustrations; guided projects for beginners.

Cons: Slow on older Macs; some interface elements are unattractive.

List price: $30

Company: Grolier, *800/353-3140*, **www.grolier.com**

Macworld's Buying Advice: The 2001 Grolier Multimedia Encyclopedia is an excellent resource for people working on school projects or personal research.

The Web is an excellent source of information, but you can't always count on the accuracy of what you turn up. The 2001 Grolier Multimedia Encyclopedia gives you well-researched information on two CD-ROMs, which contain more than 60,000 articles, as well as illustrations, panoramic images, video, and sound.

It's easy to search for specific information, and you can navigate by subject. The Research Center contains sample topics and suggests ways to focus your inquiry. Also, the articles are linked to further information on the Web.

But it does run very slowly on pre–USB-generation Macs. And parts of the interface have an unattractive, Windows-type look.—NANCY PETERSON

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COPYRIGHT PROGRAM SIMPLIFIES PAPERWORK

Official Copyright 1.5

Rating: ♦♦♦♦

Pros: Helpful tutorial; step-by-step guides simplify the filing process.

Cons: Weak interface; can't set up multiple addresses.

List price: $71

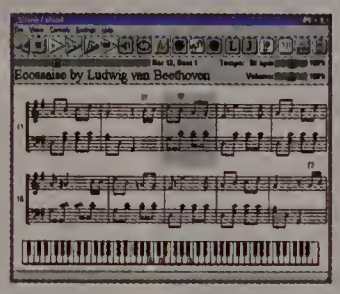
Company: Official Software, *888/325-5445,* **www.officialsoftware.com**

Macworld's Buying Advice: Official Copyright 1.5 can't take the drudgery out of filing copyright forms, but it does remove much of the mystery from the process.

Computers have made it easier to crank out screenplays, songs, digital videos, and Web-based works of art, but copyright hassles can discourage even the most eager would-be artist. Official Copyright 1.5 is a great source of copyright information, offering a tutorial on copyright issues and an efficient search feature that helps you find the right form. But the registration process is where Official Copyright really earns its keep: step-by-step instructions tell you what information to enter, where to send the completed form, and how much money to include. Alas, you can store only one mailing address to appear on registration forms and letters, and the browserlike interface can be irksome.—PHILIP MICHAELS

MIDI ACCOMPANIMENT FOLLOWS THE LEADER

Home Concert 2000



Rating: ♦♦♦♦

Pros: Smart accompaniment; displays notation on screen.

Cons: Can't print notation.

List price: $99

Company: TimeWarp Technologies, *508/252-1074,* **www.timewarptech.com**

Macworld's Buying Advice: With its ability to follow your musical lead, Home Concert 2000 is a worthwhile utility for music students, hobbyists, and those seeking a convenient and inexpensive backup band.

Cakewalk's In Concert was unique in its ability to "listen" to what you played on a MIDI keyboard and alter the tempo of its accompaniment to follow your lead. Home Concert 2000—from TimeWarp Technologies, creator of In Concert's technology—picks up where its predecessor left off. Unlike In Concert, Home Concert 2000 displays notation on screen, so you don't have to purchase sheet music separately. It can read and display the notation for any Standard MIDI file you purchase or download, though you can't print this notation from within Home Concert 2000—for that, you'll need a separate sequencer or notation program.—CHRISTOPHER BREEN

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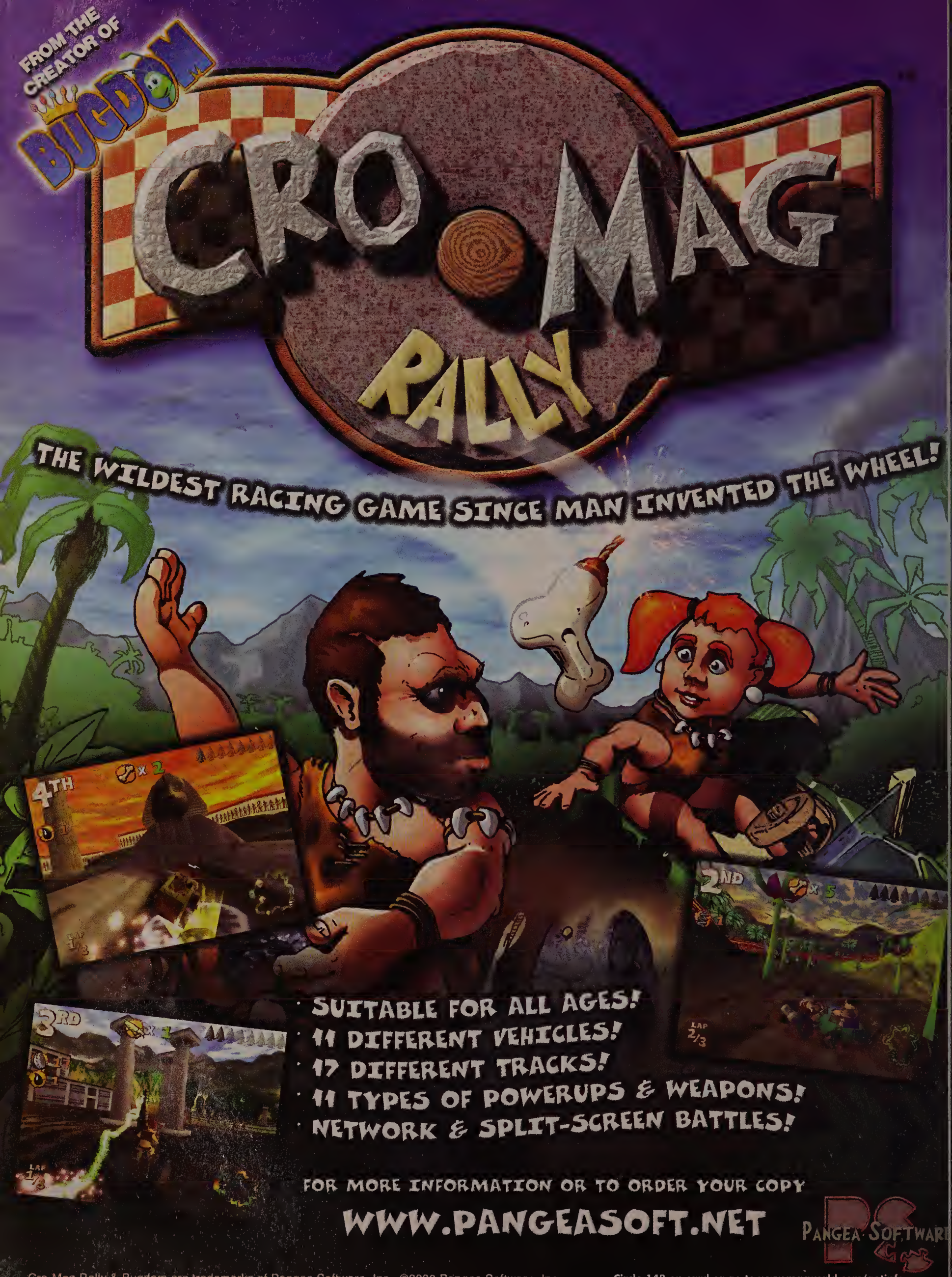

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Andy Ihnatko

The Game Room

Well, here it is. I feared this day from the moment I began writing a column about games, hiding my worry behind a wall of self-delusion insulated with false bravado. But I guess the only way through is to face up to it: like a kid who, a month after getting hired at a candy factory, turns green at the merest whiff of chocolate, I am sick of computer games.

I know; I'm as shocked as you are. I no longer want to wander dimly lit corridors blowing the upper torsos off of any vaguely threatening strangers I bump into. That 6-foot pneumatic blonde over there in spike heels and a bra made out of animal skulls, beckoning me with her taser whip: is she really marriage material? Folks, not even the promise of a street-illegal Chevy outfitted with big iron spikes on its front bumper and the promise of a heady afternoon spent turning unsuspecting pedestrians into vague discolorations on asphalt holds any allure for me . . . and I'm from *Boston*!

Even as I test the beta version of a new game, and the office walls reverberate with the screams of the dying and the impotent wails of hundreds of virtual orphans, my thoughts hark back to when playing a game meant pulling something out of the closet in the family room and reading instructions printed inside a box lid. Well, now is a good time for this sort of early-onset senility, because a lot of classic games are finally getting the treatment they deserve. With the latest official versions of these games of old, gamers can enjoy an enhanced experience . . . not a slavish copy that adds only the risk of developing brain cancer from the monitor and carpal tunnel syndrome from the keyboard.

Taking a Risk

For me, computer versions of Risk have been like alternate-party presidential campaigns. I dive into each new one with great hopes, and I climb out again mere moments later, hoping that the next try is more impressive.

It's hard to imagine a board game with greater prospects for digital treatment than Risk. Monopoly, for example, is about acquiring property through financial deals, the goal being to control the majority of a town in New Jersey—small potatoes. In Risk, you have the variously social and antisocial mechanism of Napoleonic land war, and if you win, well, you'll be grinding the entire damned *planet* under the iron-studded sole of your totalitarian jack-boot. It's a game of both subtle and dramatic strategy, in which every decision you make must be informed not just by the locations and strengths of the armies on the board but also by knowledge of your opponents' personalities.

Although I have longtime friends who are avid Risk gamers, MacSoft's Risk II ($30; 800/229-2714, www.wizardworks.com/macsoft) is the first version of this game that I can both understand and play competitively. It has scores of computer opponents and prefab missions (and Internet and network play, naturally), but the big accomplishment of Risk II is the interface it drops over game play and tactics. The board game's mixture of cards, dice, and game pieces is reduced to an easier-to-suss-out (for me, anyway) display.

This makes a killer combination: like a more traditional military-strategy game, this computer version allows

continues

sophisticated game play. But as in a board game, the complexity of the strategy is kept to a level that beginner and intermediate gamers can easily manage. You can focus on the game play, not the bookkeeping. It's hard to imagine Patton worrying about tables of hit points, you know?

Take a Risk It's definitely one of the most beautiful board games ever made . . . and it's a kick to play, too.

Wordplay

When you get down to the p's and q's, MacSoft's new version of Scrabble ($30) isn't all that different from previous editions—both the commercial ones and the unauthorized shareware knockoffs.

The computer personalities and players in this game are terrific. Opponents of all skill levels are represented, each with different styles of play. It doesn't take long to identify the opponents that give you the best mixture of incompetence and inspired brilliance. And then there's the online perfessor, whose ability to review and analyze your play means that the next time you shuffle the tiles, man alive, you can *totally* kick your grandma's ass.

What makes this Scrabble truly great is . . . the graphics. There, I said it. I'm praising the magnificent color and compelling 3-D graphics of a *board game*. Shoot me now.

But honestly, what sells the game is the fact that it just looks and feels right. A Scrabble board and its color scheme are familiar to anyone who had a childhood (or at least the sort of childhood that involved word games rather than chucking tennis balls at bats to screw with their radar). The colors are right, the angles are right, and the lighting and shading of the tiles are right.

Another Brick in the, er, Robot

Lego building sets, in their basic form, are cool. Assuming that you wisely shun the kits for building predesigned fighter planes and the like, they represent the atoms from which you can build any physical item you can imagine.

Lego MindStorms (http://mindstorms.lego.com) takes this basic idea one further: it's a fat Lego brick (the RCX) with a programmable computer inside it, plus a collection of mechanical doodads and sensors. With these tools, you can build almost any programmable mechanical gizmo you can think up.

Obviously, this thing is way too cool to give to a kid.

It's endlessly play-withable but also eminently practical. More often than I'd like to admit, I've taken the kit off the shelf to build a solution to an actual problem: a mechanism to feed my goldfish while I'm away, a simple button-pusher to make sure one of my servers stays powered up until I get back to it. I've got a well-stocked junk box and could build something far geekier using a couple of servos and actuators, but MindStorms is much more tactile, much more seat-of-your-pants, and ultimately much more satisfying.

It's also way too cool to let a simple thing such as its included Windows software stop you from playing with it. Obviously, you can work around this inconvenience by running a Windows emulator, but Pitsco and Lego also have a Mac-compatible product for schools called Robolab ($325; 800/362-4308, www.pitsco-legodacta.com), a kid-friendly drag-and-drop programming scheme. Several homespun ways to control MindStorms via the Mac have popped up, including NQC (Not Quite C), a more traditional coding system—and it's free.

Now Back to Killing

After a month of all of this thinking and board-gaming, you know, I'm refreshed. My well of blood lust springs forth anew, and I'm killing people and blowing things up far more dramatically than I ever did before. If there's one thing this experience has taught me, it's that you can never really become tired of ultraviolence; you just have to always remain faithful to the impulse for mayhem and never simply take it for granted.

You know, *vivisectioning* would be great as a triple-word score. **m**

Brilliant general/columnist ANDY IHNATKO was finally defeated during his ill-fated attempt to conquer Yakutsk and Irkutsk.

More Info:
www.enteract.com/~dbaum/

Head on over to MindStorms Jedi Dave Baum's Web site to find out about NQC and other Lego MindStorms resources.

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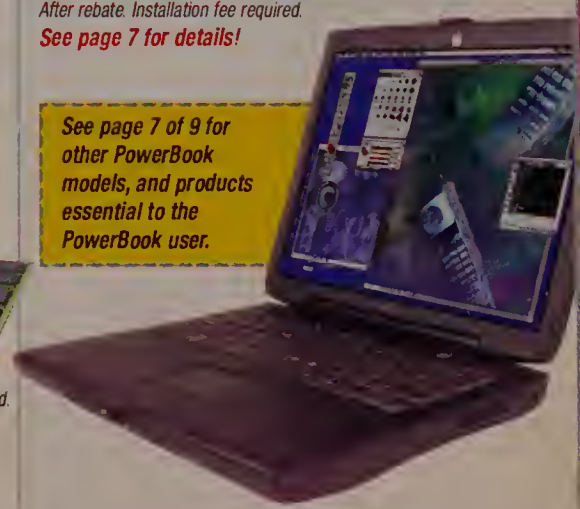

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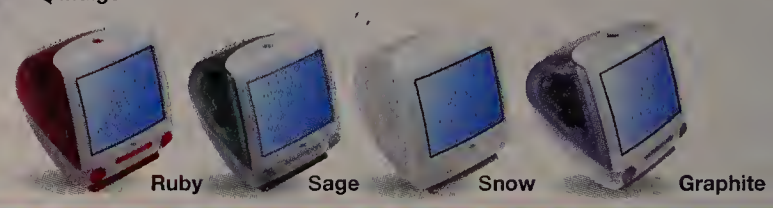

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MODEL / PROCESSOR	COLOR	SDRAM / MAX.	HDD	CD/DVD DRIVE	MODEM
iMac / G3 350MHz	Indigo	64MB / 1.0GB	7.0GB	24X** CD-ROM	56K
iMac / G3 DV 400MHz	Indigo	64MB / 1.0GB	10.0GB	24X** CD-ROM	56K
iMac / G3 DV 400MHz	Ruby	64MB / 1.0GB	10.0GB	24X** CD-ROM	56K
iMac / G3 DV+ 450MHz	Indigo	64MB / 1.0GB	20.0GB	DVD-ROM	56K
iMac / G3 DV+ 450MHz	Ruby	64MB / 1.0GB	20.0GB	DVD-ROM	56K
iMac / G3 DV+ 450MHz	Sage	64MB / 1.0GB	20.0GB	DVD-ROM	56K
iMac / G3 DV Special Edition 500MHz	Graphite	128MB / 1.0GB	30.0GB	DVD-ROM	56K
iMac / G3 DV Special Edition 500MHz	Snow	128MB / 1.0GB	30.0GB	DVD-ROM	56K

**Speeds listed are variable, maximum speeds shown.

***Free 64MB RAM upgrade AFTER MacWAREHOUSE $100 mail-in rebate.** Price before rebate is $129.95. Installation fee of $29.95 is required. Rebate coupon is available at www.warehouse.com/rebate/macwarehouse or call us at 1-800-390-0706 to request one. Offer not valid on the purchase of any reconditioned iMac. **Offer expires 1/31/01.** MacWAREHOUSE reserves the right to terminate this offer at any time. The same memory upgrade can be purchased for $69.95 but is not eligible for the "free" memory upgrade rebate. If you'd like the same memory upgrade without the rebate, please order item #CHP1037.

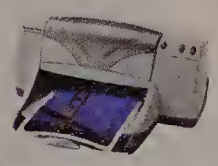
†Hewlett-Packard DeskJet 648C color printer at no cost to you AFTER mfr's $50 mail-in rebate AND Apple $50 mail-in rebate with purchase of an iMac. Offer valid on purchases made between 11/24/00 – 02/04/01. Visit www.warehouse.com/rebate/applebundle for mail-in rebates or call us at 1-800-390-0706 to request one. Offer not valid on purchases of reconditioned equipment. Offer good while supplies last.

Best selling input and output devices: enhance your iMac's productivity

EPSON

Stylus Color 777i Printer
- 8ppm black; 6ppm color
- 2800 x 720 dpi

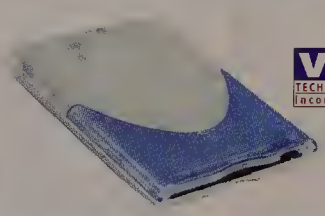
$99.95
Ask for item #PR16466.



authorized reseller hp invent

HP DeskJet 990cse Color Printer
- USB connectivity
- 17ppm black; 13ppm color
- PhotoREt III technology

$399.95
Ask for item #PR16430.



VST TECHNOLOGIES incorporated

USB Floppy Drive
- No external power source needed

$84.95
Ask for item #DR12164.

Imation Mac Neon 3.5" Floppy Disk 10-pack, only $5.99.
Ask for item #MED0540.

KEYSPAN

USB Twin Serial Adapter
- Supports up to 1Mps per port
- Compatible with Apple StyleWriters and personal LaserWriters

$79.99
Ask for item #DAD1637.

Canon

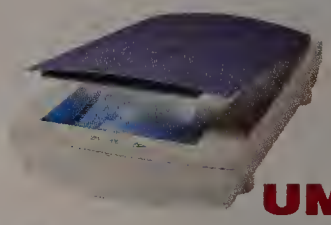
Canon ZR-10 Digital Video Camera
- 10X Optical/200X Digital Zoom
- Image stabilizer
- 2.5" LCD screen

$899.95
Ask for item #IN8604.

OLYMPUS

Olympus D-460 Zoom Digital Camera
- 1.3 Megapixel (1280 x 960 resolution)
- 3X optical zoom

$399.95
Ask for item #IN8582.



UMAX

UMAX Astra 2200 Color Scanner
- USB and SCSI interface
- 36-bit color

$99.95* after $20 rebate
Ask for item #IN8143.

***Price AFTER manufacturer's $20 mail-in rebate.** Before rebate: $119.95. Rebate coupon available at www.warehouse.com/rebate/umax, or call us at 1-800-390-0706 to request one. Offer expires 12/31/00 or while supplies last.

Orbit USB for Mac
- Designed for iMacs and USB Power Macs
- Fits the natural shape of your hand
- Manufacturer's 5-year warranty

KENSINGTON

$49.95
Ask for item #INP1761.

Call for a FREE full color catalog!

To place an order now, call your MacWarehouse Account Manager, or if you're a new customer, call one of our Customer Care Specialists who will be happy to help set up an account for your business.

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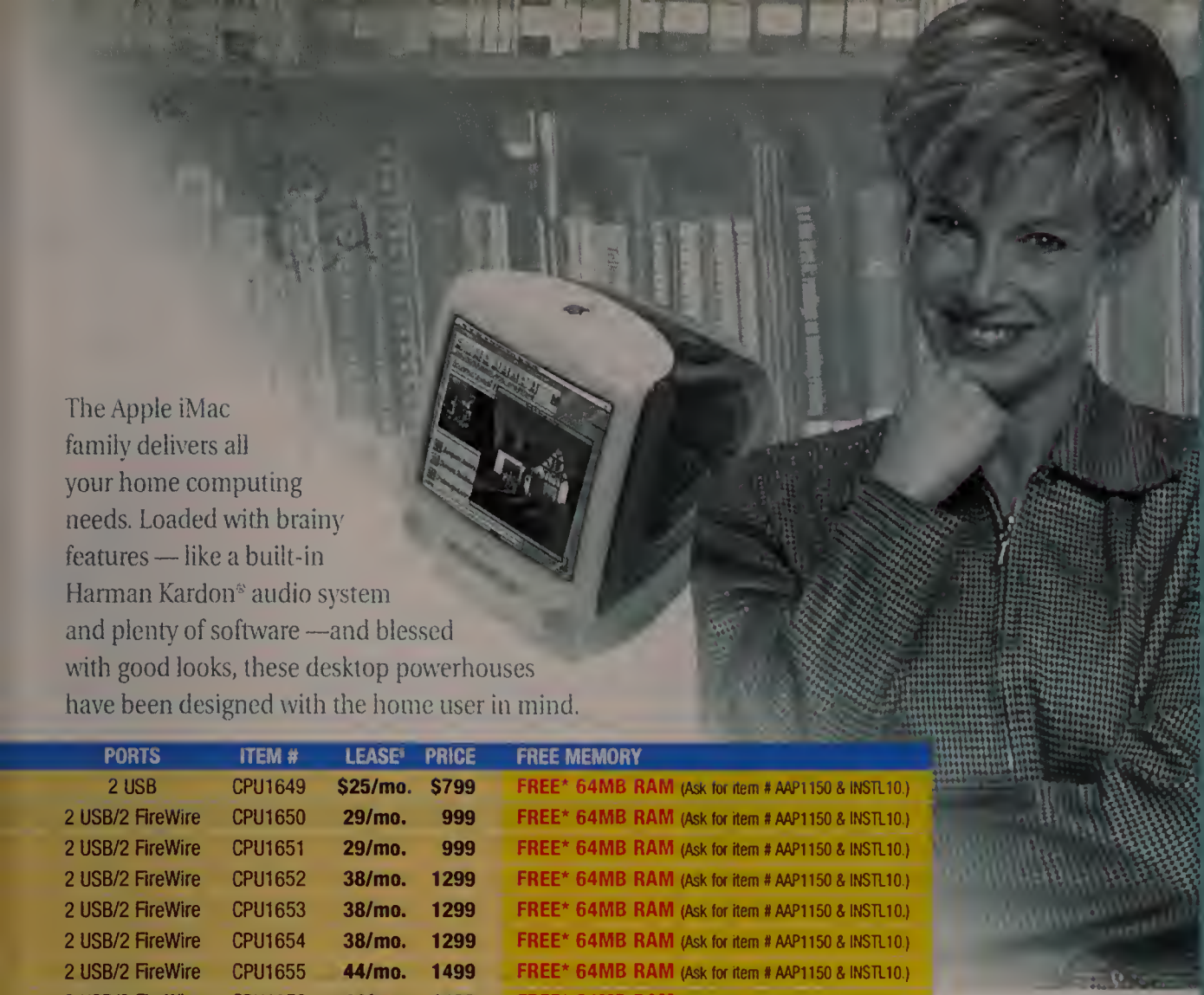
To contact your Account Manager by e-mail or to learn more about our Corporate Sales Division online, click on "Corporate Sales" at www.warehouse.com



The Apple iMac family delivers all your home computing needs. Loaded with brainy features — like a built-in Harman Kardon® audio system and plenty of software —and blessed with good looks, these desktop powerhouses have been designed with the home user in mind.

PORTS	ITEM #	LEASE§	PRICE	FREE MEMORY
2 USB	CPU1649	$25/mo.	$799	FREE* 64MB RAM (Ask for item # AAP1150 & INSTL10.)
2 USB/2 FireWire	CPU1650	29/mo.	999	FREE* 64MB RAM (Ask for item # AAP1150 & INSTL10.)
2 USB/2 FireWire	CPU1651	29/mo.	999	FREE* 64MB RAM (Ask for item # AAP1150 & INSTL10.)
2 USB/2 FireWire	CPU1652	38/mo.	1299	FREE* 64MB RAM (Ask for item # AAP1150 & INSTL10.)
2 USB/2 FireWire	CPU1653	38/mo.	1299	FREE* 64MB RAM (Ask for item # AAP1150 & INSTL10.)
2 USB/2 FireWire	CPU1654	38/mo.	1299	FREE* 64MB RAM (Ask for item # AAP1150 & INSTL10.)
2 USB/2 FireWire	CPU1655	44/mo.	1499	FREE* 64MB RAM (Ask for item # AAP1150 & INSTL10.)
2 USB/2 FireWire	CPU1656	44/mo.	1499	FREE* 64MB RAM (Ask for item # AAP1150 & INSTL10.)

Essential networking: get the most from your new iMac

CompuCable

iDOCK 2 USB MultiPort hub

- Floppy drive
- Swivel Base for iMac
- 4 USB ports
- 2 Serial ports
- 1 ADB port

$259.99

Ask for item #DEH4620.

6 foot USB Cables

$9.99 each

Ask for item #DCA4738.

Farallon

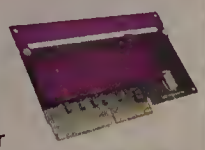
EtherMac iMac iPrint Adapter with built-in PhoneNet

- Connects your iMac to LocalTalk printers and other Macs
- Easy plug-and-play installation

$94.99

Ask for item #DEP1900.

Ethernet iPrint Adapter for StyleWriter, only $74.99.
Ask for item #DEP1739.



SONNET SIMPLY FAST

Sonnet G3 PCI 400MHz Upgrade Card

- Boost your power and speed
- 1MB cache (200MHz cache speed)

$299

Ask for item #DRI3007.

KEYSPAN

iMac USB Hubs

- Color-coordinates with any iMac color!
- Other colors available, call for details

$39.99

White Hub:
Ask for item #VW64296.
Graphite Hub:
Ask for item #VW57882.

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Providing top name brand computer solutions since 1987

Serving business, government, education and home

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MacWAREHOUSE has been providing our customers with the Apple products, software and peripheral products they want and need since 1987.

- We feature **leading name brand products** that provide you with the broadest selection possible.
- Our $2.4+ billion buying power enables us to provide you with the newest products, latest upgrades and best deals.
- Our Web site — www.warehouse.com — features **side-by-side product comparison** so you can choose the features you want and find the best product for your needs.
- MacWAREHOUSE provides **custom configuration** of your new Apple computer so it will arrive set up to go.
- We offer **customized corporate pricing online** with our Corporate Advantage program.

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§ Leases are available to business and education customers with approved credit on product orders where at least one product totals $750 or more. Payments are based on a 48-month lease. Other leasing terms available. Leasing terms subject to change without notice. Call us toll-free for complete details.

Power Mac G4s: Redefining High-Performance

The dual-processor Power Mac G4s deliver the power you need to burn through even the most complex tasks — rendering large images, constructing dynamic Web sites, performing massive scientific calculations and even professional-level video editing. *Check out these features:*

- PowerPC G4 **dual-processors up to 500MHz**, strengthened by 1MB Backside Level 2 Cache per processor
- Ultra ATA/66 **hard drives of 20, 30 or 40GB**
- ATI RAGE 128 Pro graphics card with 16MB of SDRAM
- **DVD-ROM or DVD-RAM** built-in
- **iMovie 2** software included
- Faster Network Connections —**Gigabit Ethernet** lets you transfer huge files at blazing speeds
- Two 400Mbps **FireWire ports**, two USB ports, support for up to three internal SCSI drives and two internal ATA drives
- Apple Pro Optical Mouse and Apple Pro Keyboard
- Easy Wireless Networking — Ready for AirPort Base Station (sold separately)

Now get a **FREE*** **128MB RAM** Upgrade when you buy a dual-processor Power Mac G4 featured on this page. Ask for item numbers AAP1155 and INSTL10. Installation fee required.

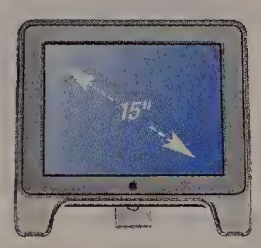
MODEL / PROCESSOR	SDRAM / MAX.	HD	DVD DRIVE	MODEM	ETHERNET
Single processor / G4 400MHz	64MB / 1.5GB	20.0GB	DVD-ROM	56K	1GB
Dual-processor / G4 450MHz	128MB / 1.5GB	30.0GB	DVD-ROM	56K	1GB
Dual-processor / G4 500MHz	256MB / 1.5GB	40.0GB	DVD-ROM	56K	1GB
Dual-processor / G4 500MHz	256MB / 1.5GB	40.0GB	DVD-RAM	56K	1GB

*Free 128MB RAM Upgrade AFTER MacWarehouse $200 mail-in rebate. Installation fee of $29.95 required. Price before rebate is $229.95. Visit www.warehouse.com/rebate/macwarehouse for mail-in rebate coupon or call us at 1-800-390-0706 to request one. Offer not valid on purchase of reconditioned Power Macs. MacWAREHOUSE reserves the right to terminate this offer at any time. Offer expires 1/31/01.

New Apple Monitors: the perfect complements to G4 power.

Apple 17" Studio Display
- 17" (16" viewable) Natural Flat Diamondtron CRT
- 0.25mm aperture grille pitch
- 1600 x 1200 @ 65Hz maximum resolution
- Built-in two port USB hub
- Designed for optimal reproduction of PANTONE colors
- Theater Mode automatically brightens screen for optimal movie viewing
- Built-in color calibration
- Compatible with new Power Mac G4 and G4 cube only

$499
Ask for item #MON1094.



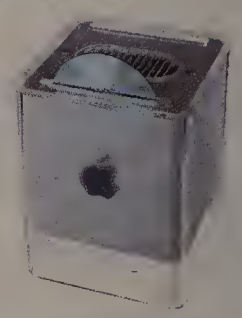
15" Apple Flat Panel Display
- 15" viewable display
- 16.7 million colors (maximum)
- 1024 x 768 pixel maximum resolution
- Built-in two port USB hub
- Anti-glare hardcoat
- Theater Mode automatically brightens screen for optimal movie viewing
- Superthin 6.7"(minimum) footprint
- Compatible with new Power Mac G4 and G4 Cube only

$999
Business Lease only $29/mo.§
Ask for item #MON1093.

Apple 22" Cinema Display
- 22" viewable display
- 16.7 million colors (maximum)
- 1600 x 1024 pixel maximum resolution
- Displays up to two full pages of text or a widescreen video DVD movie
- Built-in two port USB hub
- Anti-glare hardcoat
- Theater Mode automatically brightens screen for optimal movie viewing
- Superthin 8.3" (minimum) footprint
- Compatible with new Power Mac G4 and G4 Cube only

$3999
Business Lease only $116/mo.§
Ask for item #MON1095.

G4 power in an 8-inch cube.



Power Mac G4 Cube
- 450MHz PowerPC G4 processor
- 1MB of Backside Level 2 Cache
- 64MB SDRAM (exp. to 1.5GB)
- 20.0GB Ultra ATA/66 HD
- Built-in 56K V.90 modem
- DVD-ROM Drive with DVD-Video Playback
- ATI Rage 128 Pro Graphics Card with 16MB of Graphics Memory
- Apple Pro Keyboard and Optical Mouse
- Harman Kardon Speaker System

$1799
Business Lease only $52/mo.§
Ask for item #CPU1657.

Call for a FREE full color catalog!

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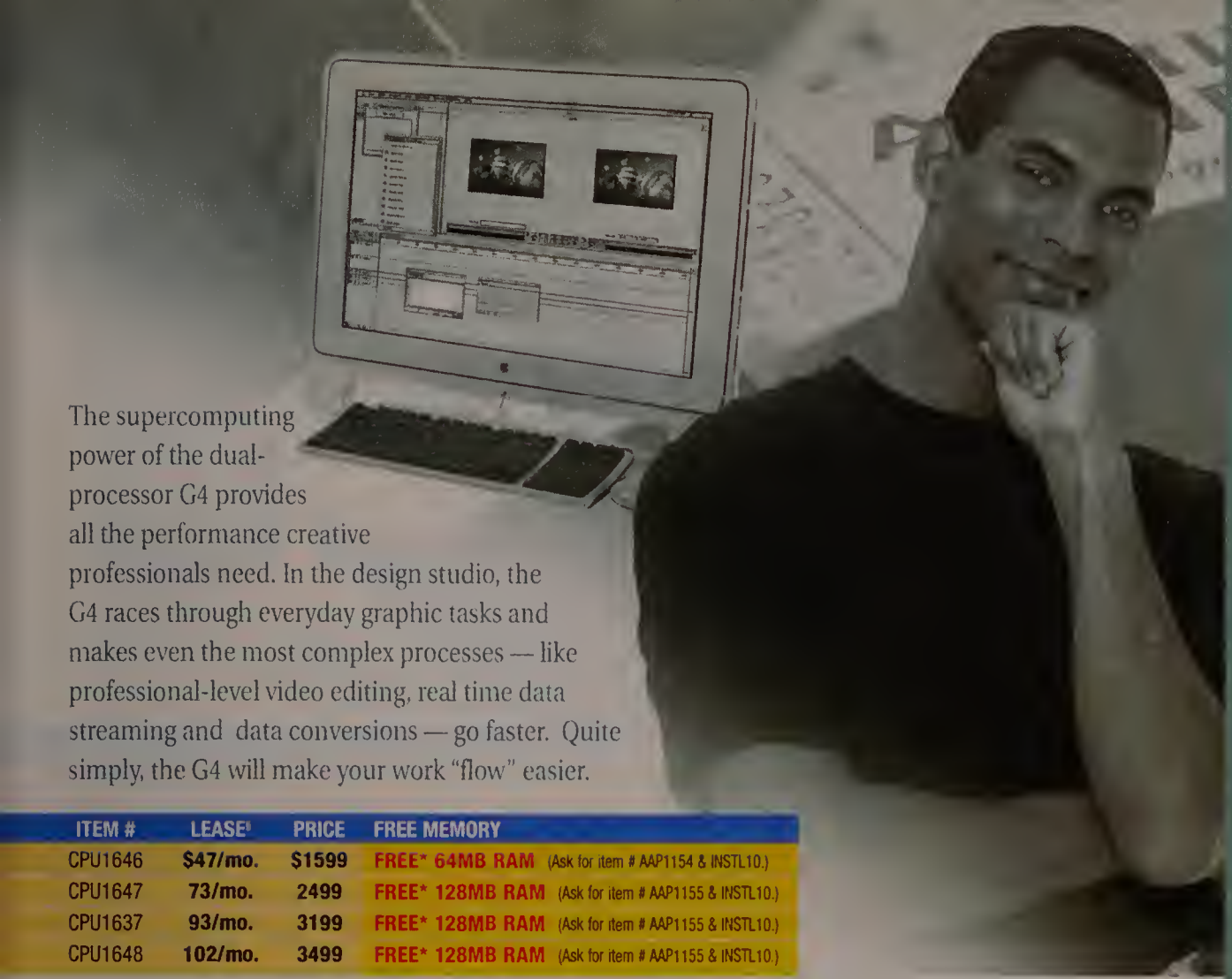
Canada orders call 1-800-603-5139

To contact your Account Manager by e-mail or to learn more about our Corporate Sales Division online, click on "Corporate Sales" at www.warehouse.com



The supercomputing power of the dual-processor G4 provides all the performance creative professionals need. In the design studio, the G4 races through everyday graphic tasks and makes even the most complex processes — like professional-level video editing, real time data streaming and data conversions — go faster. Quite simply, the G4 will make your work "flow" easier.

ITEM #	LEASE§	PRICE	FREE MEMORY
CPU1646	$47/mo.	$1599	FREE* 64MB RAM (Ask for item # AAP1154 & INSTL10.)
CPU1647	73/mo.	2499	FREE* 128MB RAM (Ask for item # AAP1155 & INSTL10.)
CPU1637	93/mo.	3199	FREE* 128MB RAM (Ask for item # AAP1155 & INSTL10.)
CPU1648	102/mo.	3499	FREE* 128MB RAM (Ask for item # AAP1155 & INSTL10.)

Selection. Service. Support. Satisfaction.

MacWAREHOUSE has been dedicated to Mac aficionados from the beginning — our very first Apple catalog was delivered 13 years ago.

- **MacWAREHOUSE provides outstanding service** — our Dedicated Account Managers are the personal link to service for you and your organization; our Customer Care Specialists take care of your needs for product sales, financial services and more.
- **We're available for service and support 24 hours a day, seven days a week** — by phone or online.
- Our **all-inclusive leasing plans** offer savvy business customers with the purchasing flexibility they need.
- Our **Corporate Advantage** provides you with a personalized Web site built to suit your organization's specific needs.

Essential add-ons: get the most from your new Power Mac G4.

adaptec

Adaptec PowerDomain 2930U Ultra SCSI Adapter
- 20MB/sec. transfer rate
- Internal and external connectors

$99.95
Ask for item #DRI3165.

RAGE ORION Accelerator

- Provides outrageously fast 128-bit 3-D gaming

ATI

$99* after mfr's $30 mail-in rebate
Ask for item #DRI3234.

*Price AFTER manufacturer's $30 mail-in rebate. Before rebate: $129. Rebate coupon at www.warehouse.com/rebate/ati, or call us at 1-800-390-0706 to request one. Offer good 10/1/00-1/15/01.

Nikon

Nikon CoolPix 990 Digital Camera USB
- 3.34 Megapixel resolution
- 3x Nikkor zoom lens
- 2048 x 1536 ppi resolution
- USB and serial interfaces

$949.95
Ask for item #IN8547.

COMPACT FLASH CARDS

- Digital film for storing pictures
- Compatible with most digital cameras

48MB Storage Card
Ask for item #MY10017 .....$99.95

PCMCIA Adapter
Ask for item #EX8129.....$12.95

QPS FireWire® CD-RW Drive 12 x 10 x 32*
- Blazing 12x record, 10x re-write
- FireWire interface

$369.95** after $30 rebate
Ask for item #DR13063.

*Speeds listed are variable, maximum speeds shown

**Price AFTER mfr's $30 mail-in rebate. Before rebate: $399.95. Rebate coupon available at www.warehouse.com/rebate/qps, or call us at 1-800-390-0706 to request one. Offer valid 10/1/00 - 1/15/01.

TDK All Speed CD-Rs

- 74 min. • 650MB

29¢* each, in 100-pack spindle, after $20 rebate

TDK.

Ask for item #ME8906.

*Price AFTER manufacturer's $20 mail-in rebate. Before rebate: $49. Coupon available at www.warehouse.com/rebate/tdk, or call us at 1-800-390-0706 to request one.

§ Leases are available to business and education customers with approved credit on product orders where at least one product totals $750 or more. Payments are based on a 48-month lease. Other leasing terms available. Leasing terms subject to change without notice. Call us toll-free for complete details.

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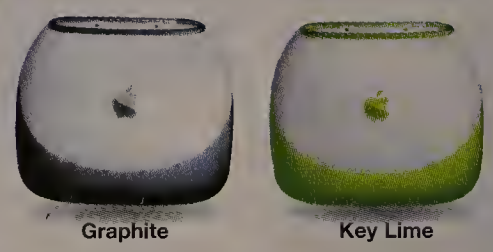
Providing top name brand computer solutions since 1987

Serving business, government, education and home

On the road, in the studio or at home, creative professionals need computers that combine power and performance. The Apple PowerBook and the iBook deliver the best technology for capturing, editing and delivering digital images, video content and more.



Special Offer!

Get an iBook G3 *plus a* **64MB RAM Upgrade** *plus an* **HP DeskJet 648C Printer**

all for as low as **$1499** after rebates!

This offer applies ONLY to iBooks featured on this page.

For FREE† RAM: Ask for item numbers AAP1157 and INSTL10. *Installation fee required.*
For HP Printer, ask for item #PR16278. You pay only $99.95††, before 2 rebates. See details below.

††Hewlett-Packard DeskJet 648C color printer at no cost to you AFTER mfr's $50 mail-in rebate AND Apple $50 mail-in rebate with purchase of an iMac. Offer valid on purchases made between 11/24/00 - 02/04/01. Visit www.warehouse.com/rebate/applebundle for mail-in rebates or call us at 1-800-390-0706 to request one. Offer not valid on purchases of reconditioned equipment. Offer good while supplies last.

Choose the portable option that's right for you:

MODEL / PROCESSOR	SDRAM / MAX.	HDD	CD/DVD DRIVE
PowerBook/ G3 400MHz	64MB / 512MB	10.0GB	DVD-ROM
PowerBook/ G3 500MHz	128MB / 512MB	20.0GB	DVD-ROM
iBook / G3 366MHz	64MB / 320MB	10.0GB	24X** CD-ROM
iBook / G3 366MHz	64MB / 320MB	10.0GB	24X** CD-ROM
iBook / G3 466MHz	64MB / 320MB	10.0GB	DVD-ROM
iBook / G3 466MHz	64MB / 320MB	10.0GB	DVD-ROM

**Speeds listed are variable, maximum speeds shown.

Connect to any network with wireless AirPort networking

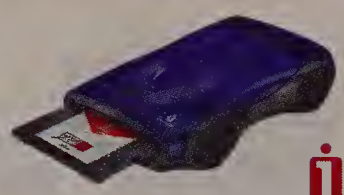
AirPort Station & Card

- Wireless networking and Internet access
- Transmits up to 150 feet
- Speeds up to 11MB per second
- Install the AirPort card into its slot in your iBook and you're ready to transmit using the iBook's two built-in antennas
- Enables several users to be online at the same time — simultaneously checking e-mail, surfing different Web sites and swapping files

AirPort Base Station (shown)
$299
Ask for item #DEB2777.

AirPort Card for PowerBook/iBook
$99
Ask for item #DEC4142.

Essential peripherals: more options on the go



Zip 100MB USB Drive

- Hot-Swappable

$99.95
Ask for item #DR13202.

100MB Zip Disk 10-pack, only $99.99. Ask for item #ME7756.

Targus Universal Notebook & Printer Case

- Two individual padded compartments that measure 11" x 13" x 2.5"

$69.95
Ask for item #AC28478.

PowerBook G3 Battery

- Lithium-ion
- Fits new 1999/2000 models

$139.95
Ask for item #ACC3728.

G3 battery for 1998 models only $199.95. Ask for item #ACC3307.

Palm IIIxe Connected Organizer

- 8MB memory, 2MB Flash memory
- Hot sync cradle for easy synchronization
- Free serial kit included
- Backlit display for easy readability

$249
Ask for item #BND3834.

DSC-S30 Cyber-Shot Digital Camera

- 1.3 megapixel optical res.
- 2" LCD
- 3x optical/6x digital zoom
- 4MB memory stick
- USB interface

$499.95
Ask for item #IN8611.

New. Finepix 40i digital camera

- Captures pictures, music and up to 80 seconds of motion video
- 2.4 megapixels
- Includes tethered remote, headphones and rechargeable battery kit

$699.95
Silver: Ask for item #IN8805.
Blue: Ask for item #IN8802.

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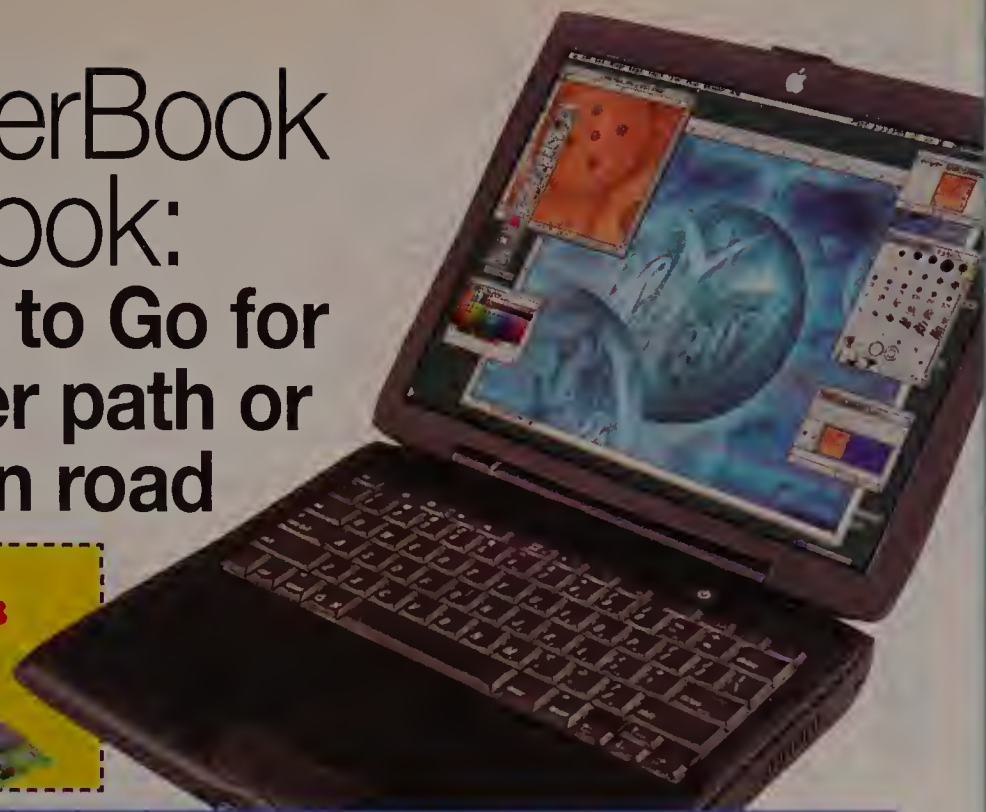
PowerBook and iBook:

Power to Go for the career path or the open road



Now get a **FREE*** **128MB RAM Upgrade** when you buy any PowerBook. Ask for item numbers AAP1156 and INSTL10. *Installation fee required.*

DISPLAY	COLOR	ITEM #	LEASE§	PRICE	FREE MEMORY
14.1" active-matrix	N/A	CPU1641	$73/mo.	$2499	FREE* 128MB RAM (Ask for item # AAP1156 & INSTL10.)
14.1" active-matrix	N/A	CPU1642	87/mo.	2999	FREE* 128MB RAM (Ask for item # AAP1156 & INSTL10.)
12.1" active-matrix	Indigo	CPU1643	44/mo.	1499	FREE† 64MB RAM (Ask for item # AAP1157 & INSTL10.)
12.1" active-matrix	Key Lime	CPU1658	44/mo.	1499	FREE† 64MB RAM (Ask for item # AAP1157 & INSTL10.)
12.1" active-matrix	Graphite	CPU1644	52/mo.	1799	FREE† 64MB RAM (Ask for item # AAP1157 & INSTL10.)
12.1" active-matrix	Key Lime	CPU1659	52/mo.	1799	FREE† 64MB RAM (Ask for item # AAP1157 & INSTL10.)

†**Free 64MB RAM Upgrade AFTER MacWAREHOUSE $100 mail-in rebate.** Installation fee of $29.95 required. Price before rebate is $129.95. Qualifying PowerBooks: CPU1641, CPU1581 and CPU1642. The same memory upgrade can be purchased for $99.95 but is not eligible for the "free" memory upgrade rebate. If you'd like the same memory upgrade without the rebate, please order item #CHP9821.

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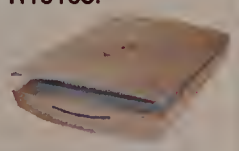

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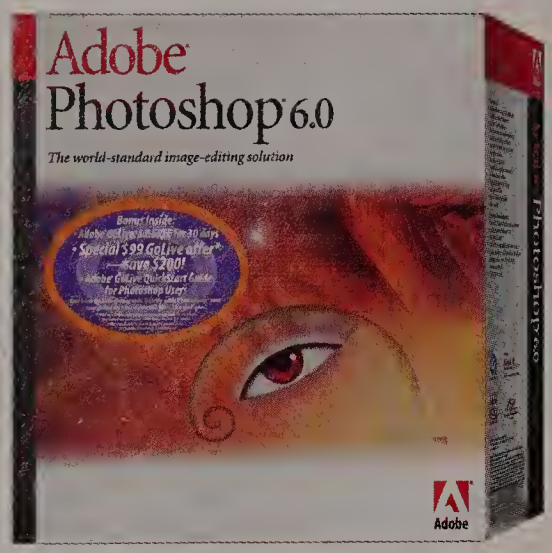

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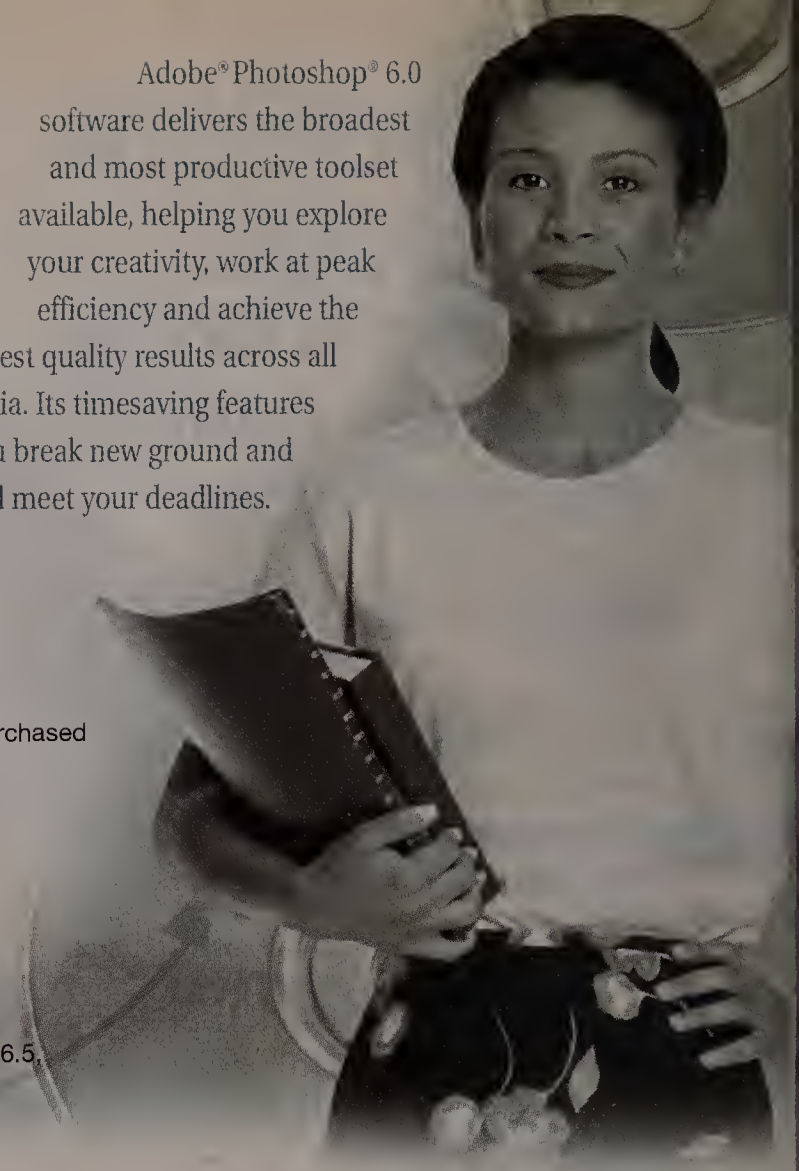

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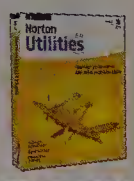

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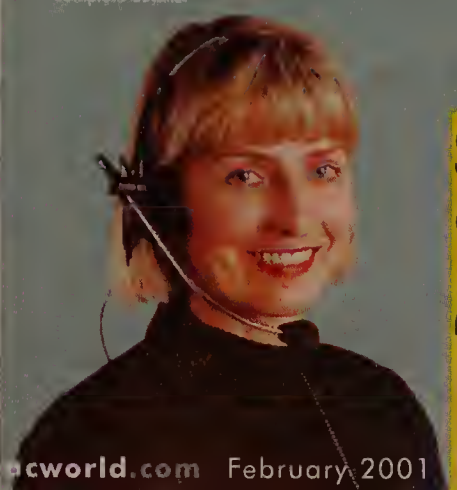

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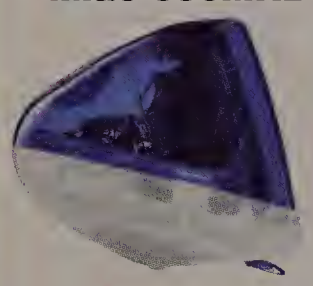

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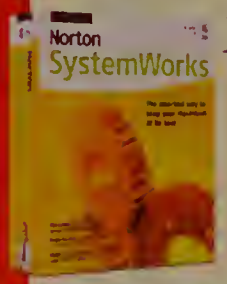

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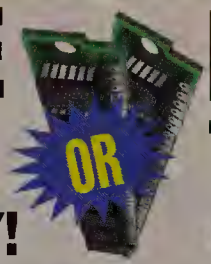

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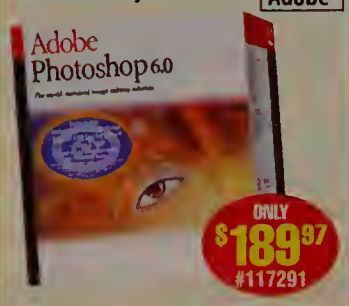

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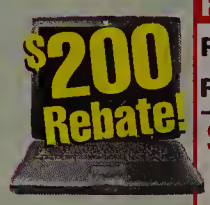

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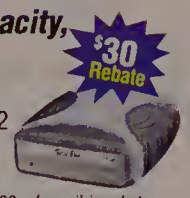

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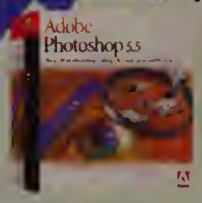

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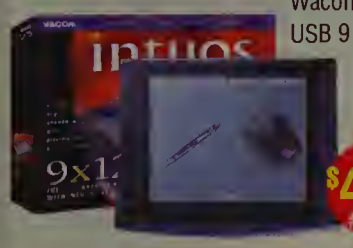

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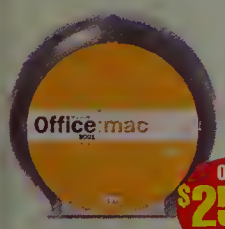

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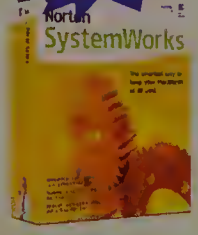

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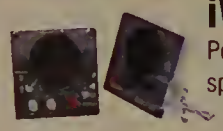

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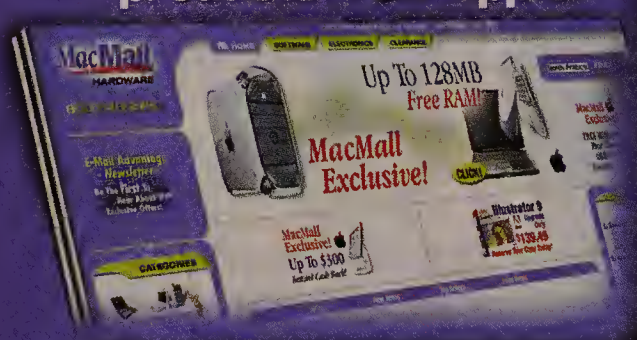

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*Price after $50 Apple mail-in rebate and $50 Hewlett Packard mail-in rebate. Offer valid 11/24/00 - 2/4/01. Initial price of HP DeskJet is $99.99. Professional installation fee of $30 required for free 64MB RAM. RAM promotion expires 1/8/01.

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CATALOG EXPRESS

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4MB RAM Plus
ter with Any iBook!

Authorized Reseller

iBook

The New iBook Special Edition– Now with DVD!

In addition to all the great features found on the new iBooks, the new iBook Special Edition has something built-in that will make it the life of the party—and that's DVD. You and your friends can slip the latest DVD movie titles into the DVD-ROM drive and watch it on a brilliant 12.1" display, or even on your TV.

Processor and storage

- 466MHz PowerPC G3 processor
- 256K on-chip level 2 cache
- 66MHz system bus; 66MHz memory bus
- 64MB of PC100 SDRAM; supports up to 320MB of SDRAM
- 10GB Ultra ATA hard disk drive
- 6X DVD-ROM drive

Loaded with features

- Built-in 12.1" (diagonal) TFT SVGA active-matrix display
- Up to 6 hours of battery life
- 10/100Base-T Ethernet ready for DSL or cable modem connection
- Support for AirPort wireless networking (additional purchase required)
- Support for external FireWire and USB storage devices

Own this iBook SE for as low as $50/month with the NEW MacMall EZ Payment Plan!

All iBooks Include: HP DeskJet 648C Printer
Print up to 6ppm black; 3ppm color, 600 x 300dpi res.

Now Available in Key Lime!

iBook's New Features–

Two New Models:
Indigo/Key Lime 366MHz (CD)
Graphite/Key Lime 466MHz (DVD)

- FireWire port (in addition to USB)
- New "AV Port" to connect iBook to TV (special cable is included)
- Graphite includes 6X DVD-ROM drive
- 10GB hard disk (instead of 6GB)
- iMovie 2 is included
- 256K ON-CHIP L2 cache (instead of 32K ON-CHIP L1 cache and 512K BACKSIDE L2 cache)
- ATI Rage Mobility 128 with 8MB RAM (instead of ATI Rage Mobility with 4MB)

All Models Include the New iMovie 2 Video Editing Software!

Extra 64MB RAM FREE
HP DeskJet 648C Color Printer
iBook Special Edition with DVD

all this for only **$1,794***

#955225 Graphite / #955226 Key Lime

See page 9 for details on the new MacMall EZ Payment Plan.

*Price after $50 Apple mail-in rebate and $50 Hewlett Packard mail-in rebate. Offer valid 11/24/00 - 2/4/01. Initial price of HP DeskJet is $99.99. Professional installation fee of $30 required for free 64MB RAM. RAM promotion expires 1/8/01.

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Upgrades for your iMac and iMac DV

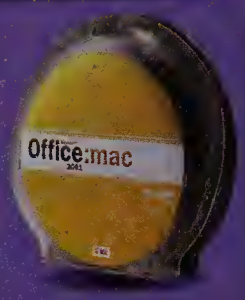
VIKING COMPONENTS

Have your RAM professionally installed by one of our factory-trained technicians for only $30. Ask for #2214. See page 12 or visit our Web site: macmall.com for more Viking memory. Prices are valid at time of press & are subject to change due to market fluctuations. Please call for most current pricing.

#52913	64MB PC100 SDRAM	$105.99
#52914	128MB PC100 SDRAM	$229.99
#52915	256MB PC100 SDRAM	$449.99
#58576	512MB PC100 SDRAM	$1,199.99

Microsoft Office 2001!

Order Today!
All the essentials made easy!
Made for the Mac!



upgrade for as low as $254.99 #849861

#849861	Office 2001 Upgrade	$425.99

Hot Peripherals!

OLYMPUS

FREE 16MB SmartMedia Card!

D-490 Zoom Digital Camera
your price $499 #954521

QPS Que!Fire 12x10x38 FireWire CD-RW

Last Chance!

your price $349.99
#951639
Price after $30 mfr. mail-in rebate until 1/15/01.

iBot™ Desktop FireWire Video Camera

Orange Micro Inc.

your price $149.99
#880451

Crescendo G4—450/200MHz PCI Upgrade Card

SONNET SIMPLY FAST

with 1MB backside cache

only $598.99 #59435

Authorized Reseller

Airport Base Station

only $294
#57373

#57369	Airport Card	$99.99

FREE Extra 6
HP DeskJet 648C P

iMac 350MHz G3 Processor

The new iMac has a faster processor and a bigger hard disk so you can quickly surf the Internet, send and receive e-mail, whip out homework assignments and play CDs on its Harman Kardon Odyssey audio system.

Processor and Memory

- 350MHz G3 PowerPC processor
- 64MB SDRAM; support up to 1GB
- 7GB Ultra ATA hard disk drive
- Slot-loading 24X speed CD-ROM drive
- Built-in 15" (13.8" viewable image size)

Own this iMac for as low as $23/month with the NEW MacMall EZ Payment Plan!

All iMacs Include: HP DeskJet 648C Printer
Print up to 6ppm black; 3ppm color, 600 x 300dpi res.

Extra 64MB RAM FREE!
HP DeskJet 648C Color Printer
350MHz iMac

all this for only **$799*** #955227 (Indigo only)

See page 9 for details on the new MacMall EZ Payment Plan.

*Price after $50 Apple mail-in rebate and $50 Hewlett Packard mail-in rebate. Offer valid 11/24/00 - 2/4/01. Initial price of HP DeskJet is $99.99. Professional installation fee of $30 required for free 64MB RAM. RAM promotion expires 1/8/01.

iMac DV 400MHz G3 Processor

Includes USB and FireWire ports!

- 400MHz G3 PowerPC processor
- 64MB SDRAM; Support up to 1GB
- 10GB Ultra ATA hard disk drive
- Slot-loading 24X speed CD-ROM drive
- Built-in 15" CRT (13.8" viewable size)
- Two FireWire and two USB ports

Own this iMac for as low as $28/month with the NEW MacMall EZ Payment Plan!

Extra 64MB RAM FREE!
HP DeskJet 648C Color Printer
400MHz iMac

all this for only **$999*** #955228 (Indigo) #955229 (Ruby)

See page 9 for details on the new MacMall EZ Payment Plan.

*Price after $50 Apple mail-in rebate and $50 Hewlett Packard mail-in rebate. Offer valid 11/24/00 - 2/4/01. Initial price of HP DeskJet is $99.99. Professional installation fee of $30 required for free 64MB RAM. RAM promotion expires 1/8/01.

Order	MHz	RAM	FREE RAM	TOTAL RAM	Hard Drive	Drive	56K Modem	USB Ports	FireWire Ports	iMovie 2	Price	or as low as
#955227	350	64MB	64MB	128MB	7GB	CD	Yes	2	None	No	$799	$23/mo
#955228	400	64MB	64MB	128MB	10GB	CD	Yes	2	2	Yes	$999	$28/mo
#955229	400	64MB	64MB	128MB	10GB	CD	Yes	2	2	Yes	$999	$28/mo

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4MB RAM Plus
ter with Any iMac!

Authorized Reseller

Own this iMac DV for as low as $37/month with the NEW MacMall EZ Payment Plan!

iMac DV+ 450MHz G3 Processor

Processor and memory!
- 450MHz G3 PowerPC processor
- 512K backside level 2
- 100MHz system bus
- 64MB SDRAM; support up to 1GB

Storage!
- 20GB Ultra ATA hard disk drive
- Slot-loading 4X DVD-ROM drive
- Support for external FireWire and USB storage devices

Graphic Support and Communications!
- ATI RAGE 128 Pro with 8MB SDRAM
- 10/100Base-T Ethernet (RJ-45)
- 24-bit true color

Display Keyboard and mouse!
- Built-in 15" CRT (13.8" viewable)
- Apple Pro Keyboard and Pro Mouse

All iMacs Include: HP DeskJet 648C Printer
Print up to 6ppm black; 3ppm color, 600 x 300dpi res.

Extra 64MB RAM FREE!
HP DeskJet 648C Color Printer
450MHz iMac DV+

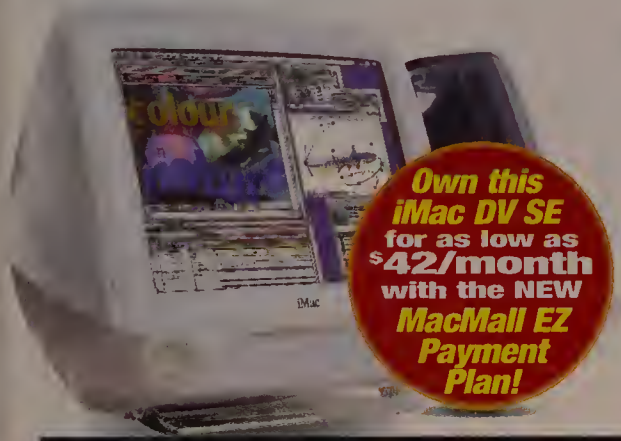
all this for only **$1,294*** #955230 (Indigo) #955231 (Ruby) #955232 (Sage)

See page 9 for details on the new MacMall EZ Payment Plan.

*Price after $50 Apple mail-in rebate and $50 Hewlett Packard mail-in rebate. Offer valid 11/24/00 - 2/4/01. Initial price of HP DeskJet is $99.99. Professional installation fee of $30 required for free 64MB RAM. RAM promotion expires 1/8/01.

iMac DV SE 500MHz G3 Processor

More Speed, More Power!
The new iMac DV Special Edition, the fastest, most powerful iMac ever. It comes with new features such as iMovie 2 software. iMovie 2 takes the original iMovie software and enhances its capabilities.



Own this iMac DV SE for as low as $42/month with the NEW MacMall EZ Payment Plan!

Desktop Movie Studio!
- 500MHz G3 PowerPC processor
- 128MB SDRAM; supports up to 1GB
- 30GB Ultra ATA hard drive
- Slot-loading 4X speed DVD-ROM drive
- Two FireWire ports and two USB ports
- 10/100Base-T Ethernet
- Built-in 15" CRT (13.8" viewable)
- Integrated Harman Kardon audio system
- Apple Pro Keyboard and Pro Mouse

Order	MHz	RAM	FREE RAM	TOTAL RAM	Hard Drive	Drive	56K Modem	USB Ports	FireWire Ports	iMovie 2	Price	or as low as
#955230	450	64MB	64MB	128MB	20GB	DVD	Yes	2	2	Yes	$1,294	$37/mo
#955231	450	64MB	64MB	128MB	20GB	DVD	Yes	2	2	Yes	$1,294	$37/mo
#955232	450	64MB	64MB	128MB	20GB	DVD	Yes	2	2	Yes	$1,294	$37/mo
#955233	500	128MB	64MB	192MB	30GB	DVD	Yes	2	2	Yes	$1,494	$42/mo
#955234	500	128MB	64MB	192MB	30GB	DVD	Yes	2	2	Yes	$1,494	$42/mo

Memory Upgrades for your New Apple® iMac™! VIKING COMPONENTS

#52913	64MB PC100 SDRAM	$94.99
#52914	128MB PC100 SDRAM	$186.99
#52915	256MB PC100 SDRAM	$319.99
#58576	512MB PC100 SDRAM	$1,095.99

Have your RAM professionally installed by one of our factory-trained technicians for only $30. Ask for #2214. See page 13 or visit our Web site: macmall.com for more Viking memory. Prices are valid at time of press and are subject to change due to market fluctuations. Please call for most current pricing.

Extra 64MB RAM FREE!
HP DeskJet 648C Color Printer
500MHz iMac DV Special Edition

all this for only **$1,494*** #955233 (Graphite) #955234 (Snow)

See page 9 for details on the new MacMall EZ Payment Plan.

*Price after $50 Apple mail-in rebate and $50 Hewlett Packard mail-in rebate. Offer valid 11/24/00 - 2/4/01. Initial price of HP DeskJet is $99.99. Professional installation fee of $30 required for free 64MB RAM. RAM promotion expires 1/8/01.

Order Any Time! Open 24 Hours! Order Today by 10p.m. EST—Get it Tomorrow by 10:30a.m.!

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Upgrades for Your Power Mac G4! VIKING COMPONENTS

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#813179	64MB SDRAM DIMM	$106.99
#813177	128MB SDRAM DIMM	$196.99
#813178	256MB SDRAM DIMM	$449.99
#58576	512MB SDRAM DIMM	$1,199.99

Hot Peripherals!

DCR-TRV20 Digital Camera SONY

only $1,699 #80282

Call for current price!

harman/kardon **Soundstick 3-Piece USB Speakers**

only $189.99 #952775

Spressa 10x4x32 Firewire CD-RW Drive SONY

only $309.99 #57282

While supplies last.

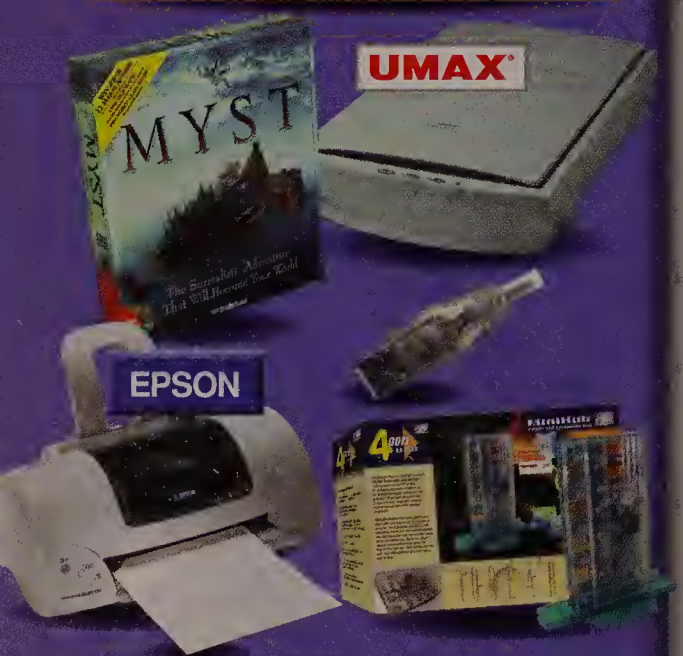
Authorized Reseller

Now Available at MacMall!

Apple® Pro Keyboard $59 #953968

Apple® Pro Mouse $59 #953969

MacMall Exclusive!



Bundle for only $149.99* #954279

Complete your system with this great bundle and save on these name brand peripherals when you purchase any new Mac. Supplies are limited so order now! Price reflects $20 mail-in rebate.

What's NEW from

Be the first one to get all the latest products!

Get Twice the Crushing Power!

The Power Mac G4 has effectively doubled its brainpower with its new dual processor architecture.

Velocity Engine— the heart of a supercomputer!

The new dual processor Power Mac G4 with Velocity Engine can achieve speeds of up to twice as fast as its predecessor. It delivers a sustained performance of over one gigaflop.

The Processing Powerhouse:

- Up to two 500MHz PowerPC G4 processors
- 1MB of backside level 2 cache
- 64MB SDRAM (supports up to 1.5GB)
- Two 400Mbps FireWire ports
- Built-in DVD
- Pre-installed iMovie video editing software

Display sold separately. See below for the full line of Apple displays.

Apple Power Macintosh G4

starting at $1,594 #951068

Own this Power Macintosh G4 for as low as $45/month with the *New MacMall EZ Payment Plan!*

Order	MHz	RAM	Hard Drive	Drive	Modem	USB Ports	FireWire Ports	Airport Ready	Network	Price	as low as
#950986	(2)400	128MB	30GB	DVD-ROM	56K	2	2	Yes	1000BT	$2,494	$70
#952964	(2)500	256MB	40GB	DVD-ROM	56K	2	2	Yes	1000BT	$3,194	$89
#951067	(2)500	256MB	40GB	DVD-RAM	56K	2	2	Yes	1000BT	$3,194	$89

Single Processor G4!

The newest version of the Power Mac G4 is also available with a single 400MHz processor. It gives you the features of the dual processor models at a lower price: ATI RAGE 128 Pro graphics card, built-in USB and FireWire, Apple Pro Mouse and Pro Keyboard—and even Gigabit Ethernet!

- 400MHz PowerPC processor
- 64MB RAM
- 20GB Ultra ATA hard disk
- DVD-ROM drive or DVD-RAM drive
- 10/100/1000Base-T Ethernet
- Apple Pro Keyboard and Pro Mouse

Monitor sold separately.

Single Processor G4

starting at $1,594* #951068

Own this Power Mac G4 **for as low as $45/month with the NEW *MacMall EZ Payment Plan!***

Call for even lower prices!

Order	MHz	RAM	Hard Drive	Drive	Modem	USB Ports	FireWire Ports	Airport Ready	Network	Price	as low as
#951068	400	64MB	20GB	DVD-ROM	56K	2	2	Yes	1000BT	$1,594	$45

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3. Enter part# in "Catalog Express"
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Macworld?

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Apple PowerBook® G3 Series

With the PowerPC G3 processor delivering speeds of up to 500MHz and built-in FireWire®, the new PowerBook gives you the performance and portability you need. It is an ideal choice for creative professionals, educators, and anyone else who needs performance to go.

Processor and Storage:

- 400 or 500MHz PowerPC G3 processor
- 64 or 128MB RAM; 2 SO-DIMM slots support up to 512MB
- 1MB backside Level 2 Cache; 160 or 200MHz dedicated 64-bit backside bus
- 10 or 20GB Ultra-ATA/66 hard drive
- Built in 56K Modem
- DVD-ROM drive with DVD video play back
- Hot-swappable expansion bay supports CD-ROM, DVD, Zip, SuperDisk or hard drive

Loaded with Features:

- Only weighs 5.7-pounds
- 14.1" Active-Matrix Display
- 2 USB ports and 2 FireWire ports
- Built-in 10/100Base-T Ethernet
- AC adapter and battery included
- Includes iMovie 2.0 software & Mac OS 9

New Apple PowerBook® G3 Series

only $2,494 #952730

Own this New PowerBook for as low as $70/month with the **New MacMall EZ Payment Plan!**

The new PowerBook lets you capture, edit and deliver digital video content for broadcast, the web or for presentations.

Order	MHz	RAM	Hard Drive	Drive	Modem	USB Ports	FireWire Ports	Airport Ready	Nic	Price	as low as
#952730	400	64MB	10GB	DVD-ROM	56K	2	2	Yes	10/100	$2,494	$70
#952731	500	128MB	20GB	DVD-ROM	56K	2	2	Yes	10/100	$2,994	$84

Order Any Time! Open 24 Hours! Order Today by 10p.m. EST—Get it Tomorrow by 10:30a.m.!

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AOL Keyword: MacMall *Mention your Priority Code: #ZMWD123*

Hot Peripherals!

Internal Zip Drive for 1999 and New 2000 Model PowerBook G3s

VST

only $199.99

#57669 with CPU purchase.

FireWire Card Bus IEEE 1394

KEYSPAN

only $89.99

#72948

PowerBook G3 Battery (Apple)

only $149.99

#47086

FREE! Retracting phone cord, Delorme Street Atlas and Ethernet cable.

PowerPrint Mobile Edition

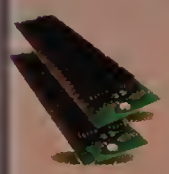
Print to any printer on the road.

only $99.99 #76252

HP DeskJet 350C Portable Printer

only $269.99

#61359



VIKING COMPONENTS

Upgrades for Your PowerBook G3!

#57816	64MB PowerBook FireWire	$129.99
#57817	128MB PowerBook FireWire	$249.99
#57818	256MB PowerBook FireWire	$509.99

Have your RAM professionally installed by one of our factory-trained technicians for only $30. Ask for #2214. See page 7 or visit our Web site: macmall.com for more Viking memory. Prices are valid at time of press & are subject to change due to market fluctuations. Please call for most current pricing.

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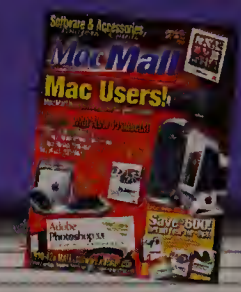


NEW from Macromedia!

Flash 5 Upgrade

Design and deliver distinctive, low bandwidth Web sites with Macromedia® Flash™ 5, the standard for creating high-impact Web experiences, used by over half a million Web authors worldwide.

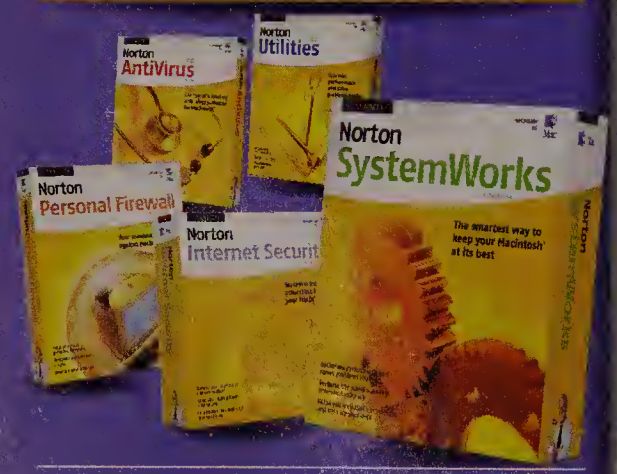
upgrade for only $138.99 #950401

Dreamweaver 4 Fireworks 4 Studio Upgrade

Dreamweaver 4 Fireworks 4 Studio allows you to create, edit and animate bitmap and vector Web graphics. It adds advanced interactivity and popup menus in the Macromedia® Fireworks® professional environment.

upgrade for only $189.99 #953745

NEW from Symantec!



#852776	Norton SystemWorks 1.0	$69.99*
#852775	Norton Utilities for Mac 6.0	$44.89*
#852774	Norton AntiVirus 7.0 for Mac	$9.99*
#852815	Norton Personal Firewall 1.0	$44.89*
#852777	Norton Internet Security	$59.99*

*Price after rebates. Call for details.

Hot New Software Titles!

Techtool Pro 3.0

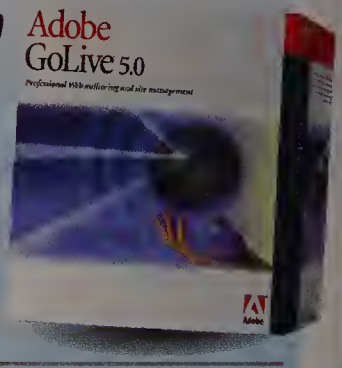
No other program tests as many different aspects of your Macintosh as thoroughly as Techtool Pro 3.0. The key to maintaining a healthy Mac is to install it before you have problems!

New! VERSION!

only $88.99 #30489

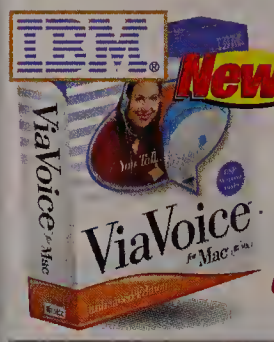
Adobe GoLive 5.0

Industrial-strength Web design, production and management for professional, dynamic, database-driven Web sites!



upgrade only $98.99 #950150

ViaVoice for Mac, Enhanced Edition

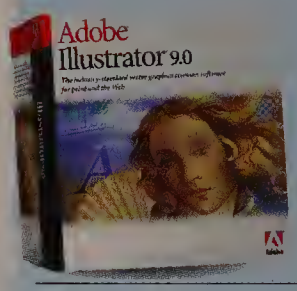


New!

The most advanced speech recognition technology ever! Includes an innovative, Plug-n-Play, USB microphone!

only $74.99 #841920
Price after $50 mfr. mail-in rebate.

Illustrator 9.0



The standard in vector graphics creation software just got better!

upgrade for only $139.99 #58042

#58038 Illustrator 9.0 Full version $388.99

The Sims

Build a simulated neighborhood and run or ruin the lives of the people that live there! The fate of a Sim, for better or worse, rests in your hands.

New!

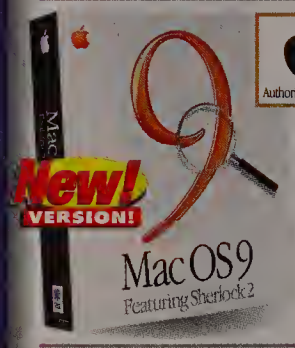
only $44.89 #82299

FileMaker Pro Upgrade

Manage your data from desktop to Web!

as low as $138.99 #812611

Mac OS 9.0.4



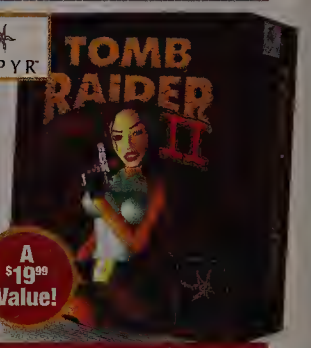
New! VERSION!

Make your Mac more powerful and more Internet-friendly than ever before. Improve audio, video and graphics performance and more!

only $88.89 #74850

Tomb Raider II

The Saga continues: Join Lara Croft in her quest for the dagger of Xian!

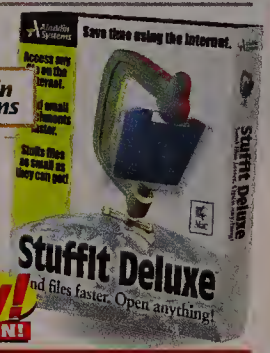


only $5.99 #954454
With any purchase.
While supplies last.

A $19.99 Value!

Stuffit Deluxe 6.0

Open virtually all compressed files on the Internet. Send files faster!



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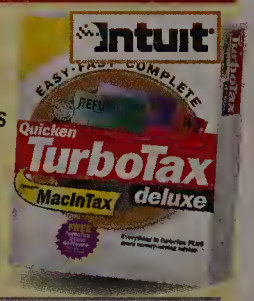
Price after $50 mfr. mail-in rebate.

New! VERSION!

It's Tax Time Season!

TurboTax Deluxe for Macintosh

TurboTax Deluxe for Mac guides you through your return and gives you money saving advice for additional tax savings.



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Stuffit Deluxe 6.0 and DiskWarrior 2.0 Bundle

MacMall Exclusive!

only $89.99 #953849

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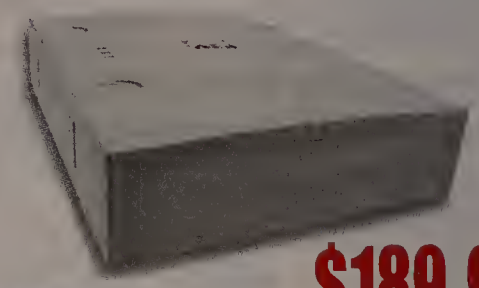

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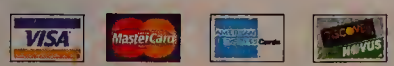

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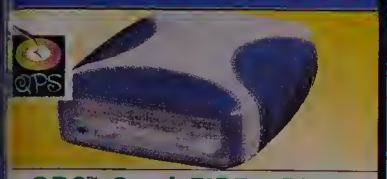

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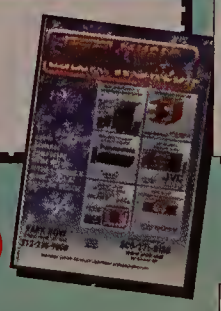

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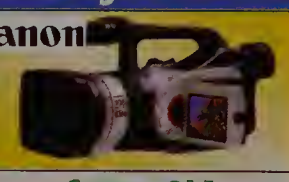

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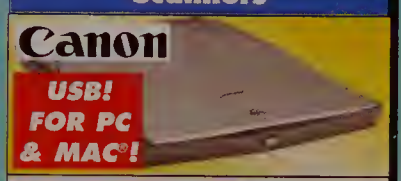

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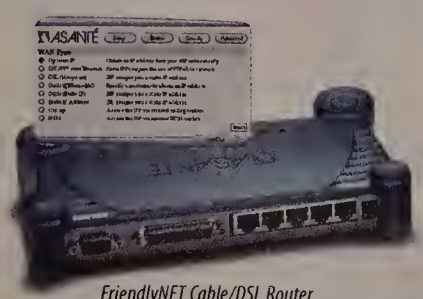

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Feature Comparison	Asanté FR3004	Linksys BEFSR41	Netgear RT311
Web-Based Configuration	Yes	Yes	Command line required for many features
Ideal for Mac/PC networks	Yes	No	No
Advanced Security:			
Log intrusion attempts	Yes	No	No
Ports open on-demand	Yes	No, always open	No, always open
Group security	Yes	No	No
Physical security	Yes	No	No
Backup Modem Port	Yes†	No	No
Print Server	Yes†	Add $170 for 1 port (PPSX1)	Add $245 for 3 ports (PS113)
Performance	Best	Slower††	Slowest††

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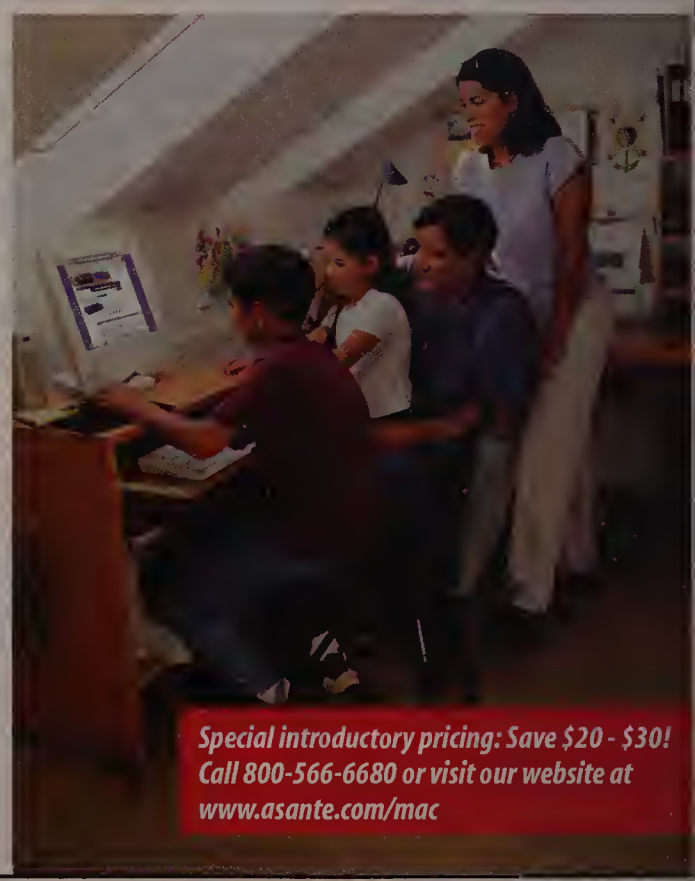

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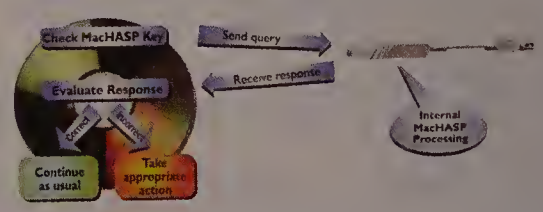
Product Diagram:	

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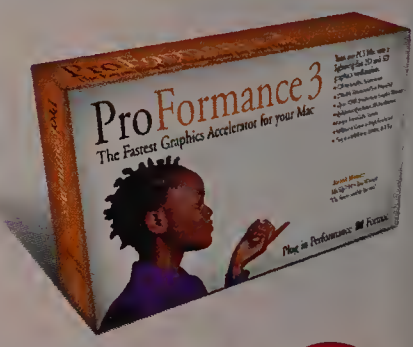

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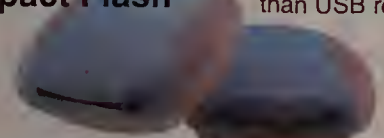

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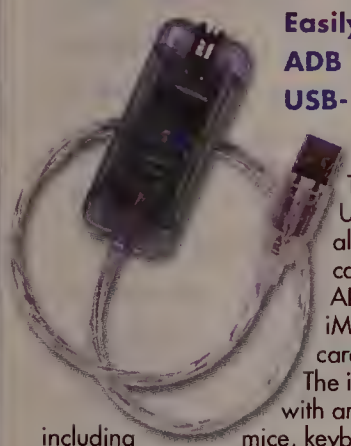

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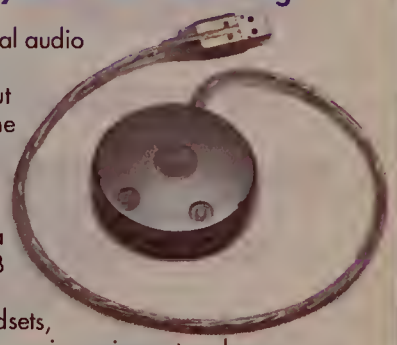

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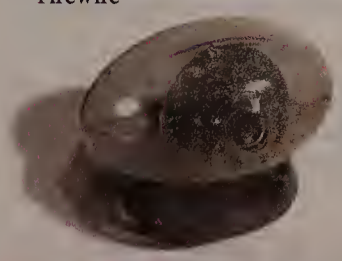

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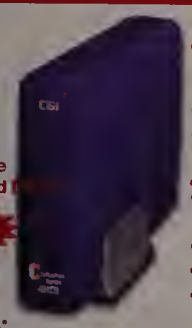

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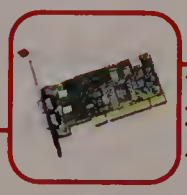

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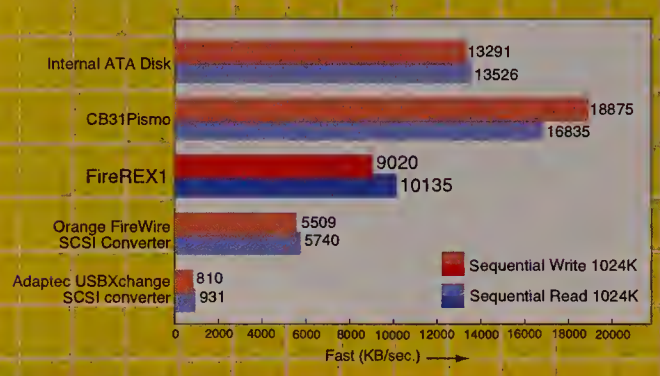

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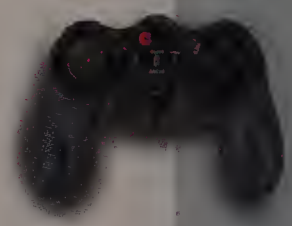

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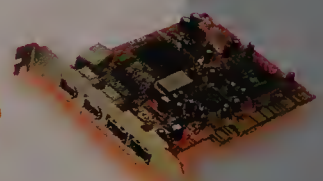

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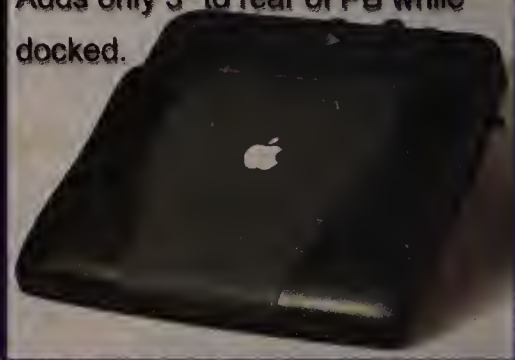

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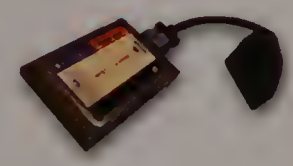

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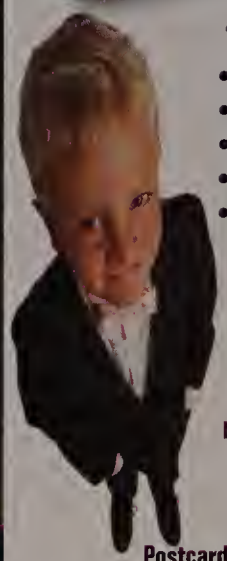

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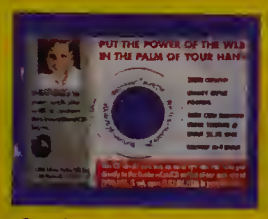

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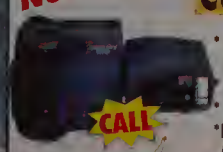

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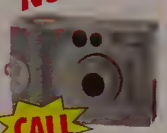

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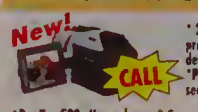

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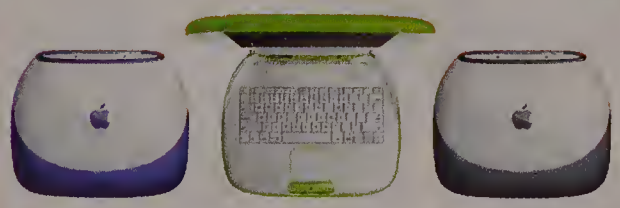

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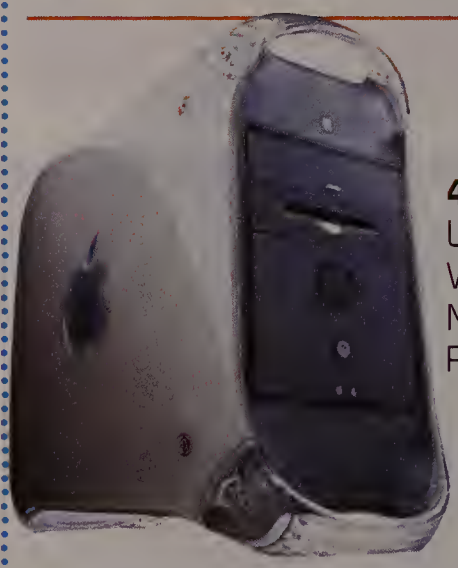

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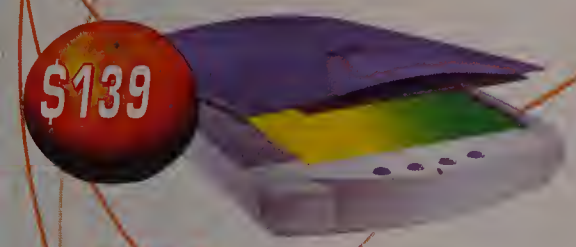

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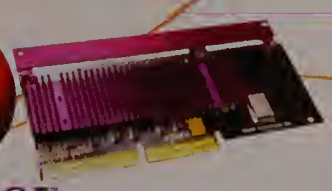

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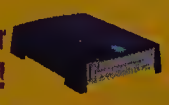

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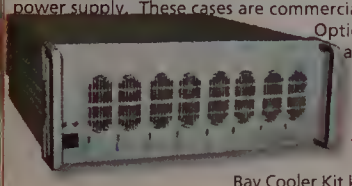
- Ultra SCSI Custom Teflon Cable Available
- Custom Enclosures in 1 Day for Raid & Arrays

SCSI Vue™ RackMount RAID

Our 8 Bay Rack Mount Enclosure includes a 250 watt power supply. These cases are commercial quality. Optional rails are also available.



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Bay Cooler Kit keeps those HOT Ultra SCSI Drives COLD as ICE!

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HOT SWAP Pull Out Bays
Compatible with all 50 pin & 68 pin SCSI Buses up to Fast SCSI 2. From: $79

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From: $99

PS Included

- Models for all SCSI types
- Fixes SCSI Cable Problems
- Doubles Cable Length (up to 18')

SCSI Vue™ Gold Diagnostic Cables

NOW: Ultra-3 LVD 160MB/s!

Benefits:
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Features:
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- Extra Heavy 26 Gauge Wire
- 100 Styles in Stock

From: $39

Gold VHD Ultra160 SCSI Cable

From: $109

Features:
- New .8mm Ultra 160 LVD SCSI Connector
- Triple Shielding (Unique Design)
- Double Gold 20u" Plated Connectors
- Diagnostic Indicators
- Large Ferrite Filters

LVD-TPO Teflon® Internal Cables

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Benefits:
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- Silver Wire Improves Signal Quality

Features:
- Perfect 90 or 132 Ohm Impedance
- Custom in 1 Day
- Triple Protected Connector - Gold contacts Silver Wire

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50 Pin Replacement Cable for External Drive Cases. TEFLON

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FireWire RAID

Speed Breakthru...40 MB/s!!!

8 Bay Tower

4 Bay Tower

2 Bay Tower

FireVue™ FireWire RAID systems offer up to 480 gigabytes of storage. Using the second generation of FireWire. We are now able to get a true 40MB/s data transfer rate; 3 Times faster than the competition!

480 Gigabyte 8 Hot-Swap Bays

8 - Bay Tower holds 480 Gigabytes of Hot-Swappable Drives. Bays incorporate exclusive Blue Neon Light. $3995 Kit

240 Gigabyte 4 Hot-Swap Bays

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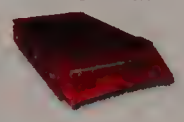
120 Gigabyte 2 Hot-Swap Bays

2 - Bay Tower holds 120 Gigabytes of Hot-Swappable Drives. Bays incorporate exclusive Blue Neon Light. $995 Kit

Our Hot-Swappable RAID Systems offer quick and easy bay interchangability and complete fault tolerance. Each Hot-Swap Bay includes 2 fans and our exclusive Blue Neon Light.



Systems can be custom configured to your specific needs. Our RAID Systems use standard IDE ATA100 Drives offering low cost and high reliability. Each system uses Maxtor DiamondMax 60 Gigabyte 7200rpm drives with three year warranties.

FireVue™ FireWire 1394 Adapters

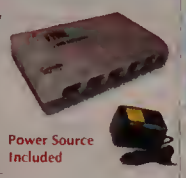
4-4 Pin - Connects 2 Cables
6-6 Pin - Connects 2 Cables
4-6 Pin - Converts 6p Cable
6-4 Pin - Converts 4p Cable

$19.95

These Firewire 1394 Gender Changer and Cable Extenders allow you to use your current cables to extend or change your connector ends. Combined with the added versatility that these devices offer is the ability to also monitor 1394 power. Our exclusive LED circuit lets you know that power is being supplied to the 1394 bus.

FireVue™ FireWire 1394 6 Port HUB

These Firewire 1394 HUB / Repeater allow you to connect up to 6 devices. They can also be wired together to offer unlimited capabilities. Power Supply guarantees proper operation of many devices at the same time and rejuvenates the lines.



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Power Source Included

FireVue™ FireWire 1394 to Cardbus

The perfect solution for any PCMCIA Laptop or Portable computer. This card is both Mac and PC compatible. Gives you two 1394 6-pin Firewire connectors. Supports up to 400Mb speed.

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1394

Optional Power Supply

FireVue™ FireWire 1394 to PCI Host

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Gives you four 1394 6-pin Firewire connectors. IEEE Standard compliant with auxiliary power connector on card. Supports up to 400Mb speed. Works with Mac OS 8.6 or newer, just plug it in. Also supports Windows 98SE, 2000, and 2000 Server.

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Ultra-160 LVD

Optional Remote Display

From: $39

Seven models available with optional Remote LED Pak. These are the finest terminators available, they fix SCSI problems and improve reliability.

Benefits:
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- Less Errors; More Reliable Data Transfer
- Diagnoses Problems
- Analyzes Signal Quality

Features:
- Active Regulation
- *Fast 50 & Fast Wide 68*
- Status Indicators
- Gold Contacts

Hot Swap Powered Terminator

$49

Now you can safely remove any SCSI device from a SCSI chain by simply clicking a switch. Optional Power Supply provides termination power to portable setups or when termination power is not being supplied properly.

50C

FireVue™ Gold FireWire 1394 Cables

From: $29

RAID Cables

Diagnostic LED monitors power on the Firewire cable. Gold Connectors, Ferrite Beads, and perfect cable characteristics. Lengths up to 32', both 4 and 6 pins.

Our 32' 6 pin to 6 pin Cable is a Granite exclusive. These cables go longer because they are made better! 2 x Specification.

FireVue™ FireWire 6" Patch Cables

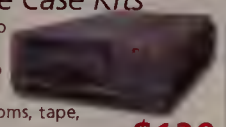
LED shows that power is being supplied

$19.95

6" Patch Cable connects External Cases or Internal Drives in Raid Cases. Large Ferrite Bead protect cable from static and noise interference.

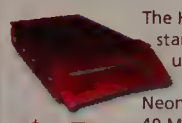
FireVue™ FireWire Case Kits

Simply add your IDE drive to our case and you have an instant FireWire Drive. Two models, 3.5" and 5.25". Supports Hard Drives, CD-Roms, tape, and a variety of other devices.



$129

FireVue™ FireWire Hot-Swap Bay



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The Hot-Swap FireWire Bays fit all standard 5 1/4" openings. Can be used in any standard enclosure or computer opening. Comes with Neon glow bar indicator, Ultra fast 40 MB/s second generation speed, and two cooling fans.

SCSI Cable Tester - LED Readout

Special Package of all 3: $99

This Digital SCSI Cable Tester can test all the popular cable styles for opens, shorts, and unreliable operation. Battery powered for easy use an

Three models to choose: • 50 IDC • 50 Cen • 68 MD

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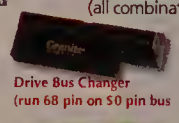
- Both 50 pin and 68 pin (all combinations)



Drive Bus Changer (run 68 pin on 50 pin bus

From: $39

Gender Changer

- 68 Pin Drive to 50 Pin IDC (runs wide drive as narrow)
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Ultra-160

For Adaptec Ultra Wide Cards
- Adapters with partial termination built in for 68 to 50 converters (converts Host Adapter)

68 Pin to 50 Pin Centronics or 50 Pin MicroD Adapters

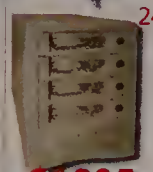
IDE Vue™ IDE RAID Systems

120 Gigabyte 2 Hot-Swap Bays

$955 Kit

Kit Includes:
- Hot-Swap Case, 2 Bays, with 65 watt power supply.
- Two Hot-Swap Bays with fans
- Two 36" Teflon Cables
- Two Maxtor 60 Gigabyte 7200 rpm ATA 100 IDE Drives
- One 2 Port Escalade™ PCI RAID Controller.

240 Gigabyte 4 Hot-Swap Bays



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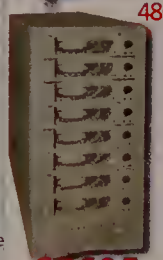
Kit Includes:
- Hot-Swap Case, 4 Bays, with 200 watt power supply.
- Four Hot-Swap Bays with fans
- Four 36" Teflon Cables
- Four Maxtor 60 Gigabyte 7200 rpm ATA 100 IDE Drives
- One 4 Port Escalade™ PCI RAID Controller.

480 Gigabyte 8 Hot-Swap Bays



$3695 Kit

Kit Includes:
- Hot-Swap Case, 8 Bays, with 250 watt power supply.
- Eight Hot-Swap Bays with fans
- Eight 36" Teflon Cables
- Eight Maxtor 60 Gigabyte 7200 rpm ATA 100 IDE Drives
- One 8 Port Escalade™ PCI RAID Controller.

All RAID Cards include support for RAID 0, 1, 10, Hot-Swap and Hot-Spare. Ultra Fast 100MB/s with low CPU overhead. These cards are unbelievably fast.

IDE Vue™ Ultra 100 RAID PCI Host

Speeds up to 100MB/s! 1/2 of a Terabyte with today's new larger capacity drives. Cost effective and fast. Linux, Win 98, NT, 2000, Mac.

Raid 0, 1, 10, Hot-Swap Hot-Spare Support

Offered in three packages, 2 Drive, 4 Drive, and 8 Drive models, it is now easy to configure a RAID System that fits your needs. Using the exclusive TwinStor™ and DiskSwitch™ technologies, Escalade supports RAID 0, RAID 1, and RAID 10. It also allows for both HOT-SWAP and HOT SPARE support. These exclusive technologies create an environment that provides both data security and blistering fast speeds.

$145 2 Port Model

$245 4 Port Model

$445 8 Port Model

IDE Vue™ Ultra 66/100 TPO Cables

Ultra 66/100 TPO Cables use 80 conductor cable and special 40 pin connectors. The best you can buy for internal or external use.

From: $29.95

IDE Vue™ Ultra 100 Teflon Cables

Ultra 66/100 Teflon Cables use 80 conductor cable and special 40 pin connectors. These are designed for RAID applications or where additional shielding and protection is required.

From: $29.95

Up to 36" Long! (double the specification length)

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Fan

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The IDE Ultra66/100 Hot Swap Bay works with hard drives and removable drives. Includes cooling fan, key lock, and 96 pin high reliability interconnection. LED indicators for Power and HDD Activity.

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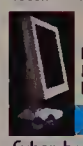

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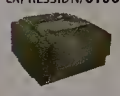

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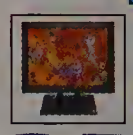

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the PowerBook's video-out jack and playing the movies in iMovie 2's Full Screen mode. The audience cheered and roared with laughter, but inside I was bumming out. As any iMovie jock can tell you, playing DV movies straight off the Mac's hard drive involves an unfortunate trade-off: you have to choose between a clear-but-jerky picture or a smooth-but-blurry one. Only transferring the movie back to your camcorder unlocks the pristine, gorgeous DV footage you really have.

In his book *Code* (Basic Books, 2000), Lawrence Lessig writes that software code is often a more effective behavior control than legal code. That's exactly the issue here. Electronically speaking, all European DV camcorders *are* capable of recording incoming video; the lock that nEUters them is only in the software. It didn't take long for Europeans to figure out how to defeat it. Web sites explain how to *dis*-disable FireWire recording using a special remote control; video shops in many European cities will perform this surgery for a fee.

It's a lesson worth studying, because U.S. manufacturers are once again preparing to shoot themselves in the same foot. Fear of piracy led to the hobbling of MP3 players and high-definition TV, and surely other gadgets will present the same issue.

But why? The arguments are the same ones we heard when VCRs first appeared. "Oh, no! No one will go to movie theaters anymore!" In fact, just the opposite has occurred—the net result of VCRs has been a staggering increase in the world's appetite for movies.

For our story, there was a happy ending. In the weeks following the arts workshop, the Austrian school found a guy with a Sony DV camcorder he'd had un-nEUtered at a shop in Vienna, so the kids were finally able to transfer their movies to tape and show them to their friends.

But overall, the practice of nEUtering camcorders in Europe is a failure, aimed at preventing a problem that, as the VCR example shows, may not even exist. Let's take the lesson: when lobbyists and pliant bureaucrats drive gadget makers to cripple their wares, they're firing clumsy bullets at a phantom enemy. **m**

DAVID POGUE (www.davidpogue.com) is the author of *iMovie 2: The Missing Manual* (Pogue Press/O'Reilly, 2001).

DAVID POGUE

Unexpected Lesson in Europe

WHY ELECTRONICS MAKERS CRIPPLE THEIR WARES INTENTIONALLY

Last October, I flew to Austria—birthplace of Mozart, Freud, and Arnold Schwarzenegger. I was one of four U.S. instructors brought to a boarding school in Salzburg to present an intensive four-day arts workshop. My art form: drama.

I'd spent ten years conducting musicals in New York, so I thought I'd be in good shape. Unfortunately, only a handful of my students had ever seen even a musical, let alone a play. In fact, this multinational group had only one dramatic cultural reference in common: American movies. I smacked my forehead—*doh!* Suddenly I knew exactly how to get 30 kids excited about acting, character, and structure. We'd make movies—iMovie to the rescue!

We borrowed three DV camcorders and the dean's FireWire PowerBook, which we loaded up with a copy of iMovie 2 that we bought and downloaded from Apple's Web site. After offering a full-day classroom session about lighting, sound, and camcorder technique, I set the kids loose. Each group of ten kids had three days to write, direct, film, and edit a five-minute movie.

The results were outstanding—and screamingly funny. (My favorite: *Young Arnold Schwarzenegger.* The star was a hilarious kid from Russia who's about as macho as Woody Allen. You get the idea.) We stayed up all night editing.

On the day the movies were to be shown, however, we ran into a snag: we couldn't output the finished films back to tape, to show at the closing presentation for students, parents, and faculty.

To understand how we wound up in this mess, you may need a strange lesson in very recent European history.

When it became clear that DV camcorders could make copies of copies with no quality loss, the European movie industry reasoned that, soon enough, piracy would run rampant—and no one would buy movies anymore.

Under pressure from the movie industry, most European governments enacted a peculiar law: If a camcorder has video-input capabilities, it's classified as a recording device, and it's subject to a huge additional tax. Camcorder manufacturers, in an attempt to keep their consumer lines inexpensive, responded by removing the digital-input feature from their consumer DV camcorders. These models have been, as the Internet punsters say, "nEUtered." (You have to pay the equivalent of $4,000 or more for a camcorder with working DV inputs.)

So there I was, hours before show time, trying to explain a moronic predicament to 30 unhappy faces: that even though we'd been able to send our video to the Mac for editing, we couldn't now return it to the camcorder for playback. The law designed to protect corporate profits ended up suffocating the creativity of a group of young moviemakers.

We wound up hooking up the projector to

continues on page 195

If it had wings, it would be

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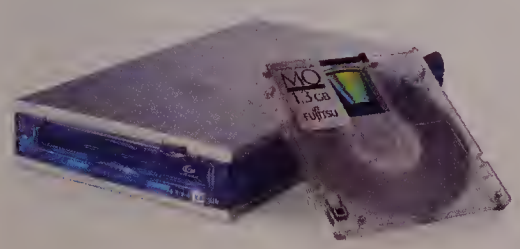

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